Three Lectures

ON THE

GROWTH RATES OF THE BODY, AND ESPECIALLY OF THE LIMBS,

IN THEIR RELATION TO THE PROCESSES OF RECTIFICATION OF DEFORMITY.

Delivered June 9th, 11th, and 13th, 1890, in the Theatre of the Royal College of Surgeons,

BY WALTER PYE, F.R.C.S. ENG.,

PROFESSOR OF PATHOLOGY AND SURGERY, ROYAL COLLEGE OF SURGEONS, ENGLAND; SURGEON TO ST. MARY'S HOSPITAL AND TO THE VICTORIA HOSPITAL FOR CHILDREN.

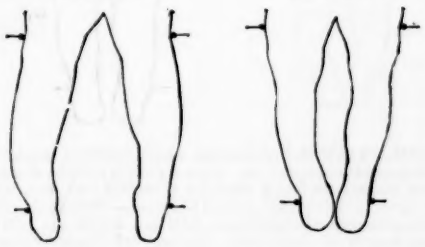
LECTURE III.

WE have now to consider the prospects of recovery from the deformities which develop in the different varieties and stages of rickets, and the ways in which the rectification may be furthered. Taking first the extremely early "marasmic" cases in which there is great softening of the bones and arrest of growth, it will be found that the number of those in which great deformity has been the result is not very high when compared with those which remain of a stature more or less below the normal, and with the wrists and ankles perhaps enlarged, but who are not otherwise notably misshapen, and it would seem that this would be almost universally the result if sufficient care were taken in the handling &c. of the infant in the acute stage, so as to avoid the causes of mechanical deformities, or promptly to remedy them in their earlier stages.

The head may remain somewhat large in proportion to the face, but the chest will almost certainly expand with the disappearance of the constitutional symptoms, thoracic and abdominal, of the disease. But these acute cases of deformities, which are so readily prevented or rectified during the period of their formation, will sometimes stubbornly resist efforts which may be made to straighten them out in the later years of childhood. Even the processes of osseous growth which are resumed appear to expend their forces in extending and strengthening the arrangements for support by forming buttresses, until the limbs, when they are not too excentrically shaped to permit of the application of splints or any form of restraining apparatus, will yield to nothing short of some form of section or fracture. Although we find examples of the best recovery, and of the worst and most permanent deformity, are both commonly to be traced back to early and acute *marasmic* rickets, the greatest number of cases of what are termed "rickety children" will be found to belong to the *non-marasmic* class in which the illness develops later, when standing or walking is possible, and in which the active cause of deformity is not the mere effect upon the limbs of their own weight, but is caused by the weight of the trunk and upper limbs acting on the lower limbs and subjecting them to the strain of supporting their inert and clumsy bodies. In this way bandy leg, anterior tibial curvature, rickety knock-knee, and other deformities, may be found in children of different ages up to six or seven, with the symptom of the disorder either present at the time of observation, or, the attack being past, having left sufficient evidence behind it of its nature. The wrists will always be somewhat full, although there is no tenderness; the anterior fontanelles may be late in closing, and dentition may be irregular. The abdomen is almost always unduly swollen, and although excess of fat about the body generally is the characteristic feature of this kind of rickets, the tissues are not firm and elastic, as during perfect health.

The total outcome of these slight departures from health is not sufficient to prevent their being commonly described, and truly so, as being in fair health but for the local deformities. It will appear at first sight that there is a distinct defect in stature, and it may be stated by the parents that in actual height the child is shorter than it was, say, six months back, before the attack. It will, however, be found, if the limbs are measured carefully along their curves, that the true length of the bones differs but little, if at all, from the average, and that the growth-rate is hardly affected, even though the deformities are getting more marked week by week. In the investigation of the progress of the deformities of the limbs, whether it be towards development of the curvatures or towards the recovery from them, it is very convenient to have graphic records of the shape and size of the limbs under observation, taken from time to time under conditions of similar position, and drawn upon the same scale on each occasion. This can readily be done by tracing with a pencil, held upright, the profile outline of the limb which has been placed on paper chequered similarly to the pattern of, and laid upon, a tracing board such as is described in Lecture I., with its chequers corresponding to those on the wood. Of the tracings, it must be remembered that they are true only of the limb curvatures taken in one plane. We may now consider the kind of information which will be afforded by the examination of a series of tracings of typical curvatures which are here given in reduced facsimile of ¼ inch. The chequers on the board and on the tracing papers are squares of two inches, so that tracings are readily superimposed. Thus in the first tracings, 1 and 1A,

TRACING 1. TRACING 1A.



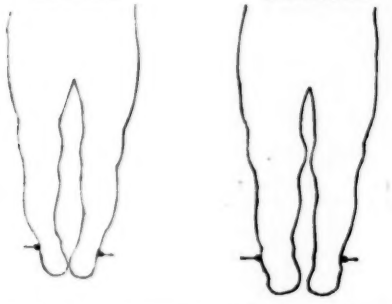
of spontaneous recovery, the mechanical causation of these bony curvatures and the effects of the weight of the body can be realised by noticing the improvement which takes place when, by any methods of management, free growth is allowed and encouraged, while the causes of distortion are rendered inoperative. Judicious manipulation and passive movement, douching, and, of course, a carefully regulated diet, will be sufficient to produce such a rapid return to the normal shape and in the limbs, by reason of their natural tendency to shapeliness being not hampered but encouraged. Then, again, the muscles do no doubt exercise a powerful moulding action upon the whole length of the bones. The Tracings 1 and 1A illustrate this point, which no surgeon with experience will dispute, that these cases, especially the early ones, will often get well by themselves, without surgical advice or any precautions, save those of the ordinary domestic nursery. These tracings were taken from a case of ordinary, rather acute rickets, with well-marked arrest of growth, in which the acute symptoms were disappearing. The growth, however, from malleolus to trochanter is under half an inch from the fourteenth to the eighteenth month, instead of about 1¼ inches, as it should be at that age. It is practically certain that the arrest of growth, extending as it did over about six months, at such a period has permanently lowered the stature the child can attain to, for not only his actual loss in the time is about two inches, in itself considerable, but at no future time is he likely to grow at anything like such a rate as is characteristic of the first and second years.

But in a large number of cases, probably in the majority, which apply for treatment, and in which the deformity is marked and increasing, the commencement of straightening will be earlier, and the process quicker, if some simple form of splinting the limbs be adopted; and for this purpose I know of no better pattern than the plain well-padded wooden ones of common use. It is probable that these act more as passive preventives of the deformity which the body weight and other mechanical causes are able in these cases, if unchecked, to effect than as active agents for rectification. The active factors of the recovery of shapeliness are the processes of growth and the moulding by the muscles. These would be hampered by any mechanical coercion which was

powerful enough to be effective when applied by means of the attachment of an external rigid bar. If this point is admitted, it follows that splints should not be applied more firmly than is necessary to retain them in place, and that they should be frequently removed for passive and active motions.

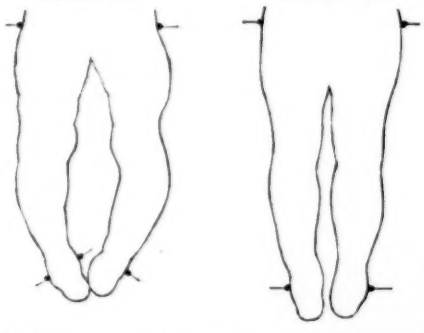
In Tracings 2 and 2A we have the ordinary external curvature in a non-marasmic case, affecting the legs only. The extent of the tibial excurvations alone is shown on the paper; but the anterior yielding was prominent as well, and diminished with the lateral curve as the legs grew. The important difference between this case and the last is that, in spite of the fact that the deformity was getting worse when treatment was applied for, there was no arrest

TRACING 2. TRACING 2A.



of growth, so that in five months, under no other treatment except general care and the use of simple splints, the legs became almost perfectly straight (Tracing 2A), and were growing up to the normal rate all the time.—June 20th, 1887: Apparent length of right limb, 12·2 in.; left limb, 12·5 in. Actual length of right limb, 12·5 in.; left limb, 12·7 in.—Nov. 23rd: Apparent length of right limb, 13·4 in.; left limb, 13·5 in. Actual length of right limb, 13·5 in.; left limb, 13·6 in. (Taken from the same tattoo marks.) The figures give an average of almost an inch in the five months. The apparent length is taken from point to point; the actual by following with the tape the excurvature of the limbs. Another condition of curvature which produces a marked apparent shortening, and which in non-marasmic cases may be perfectly recovered from by simple measures, is shown in Tracings 3 and 3A, where we have the true

TRACING 3. TRACING 3A.



bandy leg, or excurvature of the whole leg in a uniform curve. This is quite the commonest of the mechanical deformities, and up to a certain severity quite the easiest to treat by simple measures.

The measurements of J. G—— on coming under observation in March, 1887, were as follows:—Apparent length of right leg and thigh, 13·5 in.; left leg and thigh, 13·4 in. Real length of right leg and thigh, 13·7 in.; left leg and thigh, 13·85 in. In October of the same year, eight months later, we find that measuring from the same tattoo marks gives apparent length of right limb, 15 in.; left limb, 15 in. Real length of right limb, 15·1 in.; left limb, 15·2 in. There had thus been a growth in stature of 1·5 in. made up by more than 1 inch true growth, and less than half an inch improvement through straightening. Here, again, no treatment was adopted for rectification save the application of simple splints. It is difficult to assign a limit to the extent to which natural rectification may take place, provided that growth has been not notably interrupted during the development of the deformities, or has been quickly resumed after the attack. But without doubt many cases of tibial and femoral curvature come for treatment which, through long persistence of the period of deformity combined with neglect in the earlier stages, have become so stubbornly distorted that the limbs have lost all power of recovery except by the adoption of some operative or forcible method of rectification. Fig. 3 is an illustration taken from a photograph of a case of this kind, where both femora and tibiæ are markedly curved outwards and forwards. With proper precautions and in properly selected cases manual fracture of the tibia (or more rarely of the femora) may easily produce a great improvement in the deformity; and if due care be taken to preserve the improved position during the process of reunion, there is no reason to suppose that the future growth of the bone will be impaired. The almost absolute immunity from constitutional disturbance and the readiness with which the bones and the soft parts reunite without suppuration have rendered surgeons so apt to resort to some form or another of osteotomy, with or without removal of bone, that it is not altogether unwarranted to express a doubt if all the reported cases really required an operation which in itself has now ceased to be considered serious.

We need not here discuss the performance of instrumental osteoclasy, for it has never been received with favour in this country. In cases of forward and outward curvature of the femur and tibia, or of either of them, if a simple linear division of the bones be made by saw or chisel under such aseptic conditions as justify the practice of any operative surgery, the wound will heal and the bones will join straightway, and there is no evidence, so far as any cases I can find or hear of, that the pre-existing rate of growth in length of the bones is affected. But while this linear division will almost invariably be sufficient for straightening the femoral curve and the more simple forms of tibial curves, a severe anterior tibial curve in the lower third with outward curvature does not lend itself readily to the effect of any simple section, although an oblique one downward and outwards, as recommended by Collier.[1] As a rule, a wedge-shaped portion of bone will have to be removed from the tibia, at any rate, before the limb can be straightened. This proceeding is apparently as free from risk as the simple linear section, and union is as firm. But if the operation is performed earlier than after the end of the fifth year, the improvement will, I believe, be confined to a possession by the patients of a more shapely leg or legs, and there will be no practical increase of stature, and for the reason that it rarely happens even in severe cases that the difference between the apparent and the real length of the legs themselves exceeds an inch. In order to produce any satisfactory straightening by removal of a wedge, it will have to be at least three-quarters of an inch at its base—a distinct loss,—while it is further very probable that one effect of an operation safe enough, but somewhat severe at this age, will be to disturb the natural processes of rectification by growth and muscular action. These objections do not apply with the same force in the later years of childhood or of adolescence.

A short account of the case of the patient whose lower limbs before operation are shown in Fig. 3 will serve to illustrate this point. Two years ago I removed from each tibia a wedge of bone for the purpose of straightening the legs. She began to be rickety in her second year, and might be called a case of early rickets, highly developed, with persistent arrest of growth, and a very infantile type of skeleton. At the time of operation she was six years and a half old, and her height was 35¾ in.—that is, about the height of an ordinary child of three years and a half. Her thigh was 9¼ in., measured straight from the iliac spine to the tibio-femoral junction, and about ½ in. longer along the curvature. Her leg was to the malleolus just under 7½ in. measured straight. I at that time removed from each tibia a wedge, the base of which I had to make a full three-quarters of an inch across, tapering to about a quarter at the back of the bone. The fibula was broken, and did

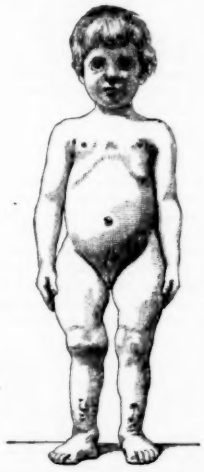
[1] Medical Chronicle, August, 1889.

not obstruct the straightening. The result was that the legs were much improved in respect of shape. Immediately after the operation the straightened legs measured almost exactly the same as the straight line from point to point gave before.

FIG. 3.

Fig. 4 shows the result of the operation two years later. She is now eight years and a half old, and is reported to have begun to grow lately. She is 37 in. high, so that in eighteen months she has only grown 1¼ in. The rate, however, may now be better than it appears. The thighs, still highly curved, are 10 in. long straight from point to point as before, and are about 0·6 of an inch longer along the two main curvatures. They have probably grown nearly an inch, but the legs have only fractionally increased, if at all, being now on both sides less than 7⅞ in. We have already seen that the normal height at the age of eight and a half is 45 in. (*vide* Table XI.), of which 25½ in. should be in the

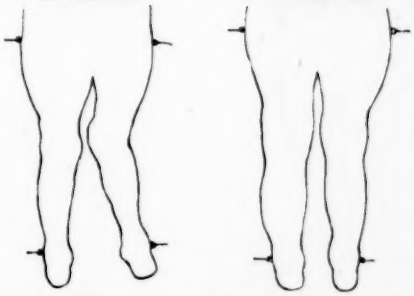
FIG. 4.



lower limb. On the whole, the result of the operation may be said to be a considerable gain in shapeliness, and hardly any in length has been obtained, while there is some ground for thinking that the natural growth has been somewhat arrested, if the very small increase in the legs is compared with the distinct although slow growth of the untouched femora. This is only one case, but I have seen others in which it has seemed almost certain that temporary arrest of growth has followed removal of wedges from the shafts of the long bones. It has been observed already that transverse linear osteotomy is not attended with disturbance of growth, so far as has been made out; and in the patient whose case has been considered, division of the femora in the middle of the shaft will probably be followed by improved shape and a distinct increase in apparent height. The advantages and immunities of transverse linear osteotomies are, however, seen in a much more striking way when they are studied by the light of the results of operations for knock-knee by linear section of the femur above the epiphyses—i.e., by what is called Macewen's operation, or some modification of it. This deformity of knock-knee differs from the tibial curvatures we have been considering in that while the latter is hardly found except in infantile rickets, the deformity of knock-knee and its reverse, the state of out-knee, may develop at any age up to the termination of adolescence. The knock-knee of rickety infants is a somewhat later manifestation of deformity than the tibial curves, and by consequence occurs more frequently in the non-marasmic cases of the third to the fifth year than in the prevailing anterior wasting form of the first and second. The average age of eighty cases of rickety genu valgum seen in three years and a half was fractionally under four years; fifty-eight were over three and under seven years, and twenty-two were under three years. It is also not uncommon to find cases in which anterior tibial curves, and even bandy legs, in early rickets have been replaced by knock-knee a year or two later.

In early and favourable cases these knock-kneed infants frequently grow straight with little or no especial attention from the surgeon, or even the nurse; in others a somewhat more favourable straightening by manipulation once or twice a day, with hand-rubbing of the muscles, will be effectual; while in a larger number still the continued use of simple wooden splints, at first long enough to keep the child off its feet, and later on to restrain the yielding at the knee only, will be required. These splints act no doubt as similar ones do in bandy leg, &c.—not as actively straightening the deformity, but passively preventing its increase, while growth and muscular action effect the recovery. Tracings 4 and 4 A illustrate the course of such a case. In other cases, either through neglect or original severity of the deforming process, the knock-knee is more marked and more stubborn, causing great and increasing difficulty in walking, and showing little or no tendency to a natural recovery, with or without the employment of splints. Rectification by manual force, or

TRACING 4. TRACING 4A.



by some planned osteotomy, has in these cases to be adopted, and in the younger patients what is termed the "redressement brusque" is often performed with good results in properly chosen cases. It is difficult to be certain what happens when a knock-knee is thus straightened by main force; but the probability is that a partial separation of the epiphysis of the femur or a fracture in the neighbourhood takes place. After the straightening the limb must be fixed in its new position by suitable splints or in plaster-of-Paris for two or three weeks. The success attending the supra-condylar linear sections above the knee-joint has of late years been so marked that this operation, introduced by Macewen, is now the one almost exclusively performed either with the chisel or the saw, and with only unimportant differences from the original plan. The operation is a simple one, and should in all cases run an aseptic course, any suppuration after its performance being as rare as it is after a tenotomy. Of late years a very large number of osteotomies for knock-knee have been

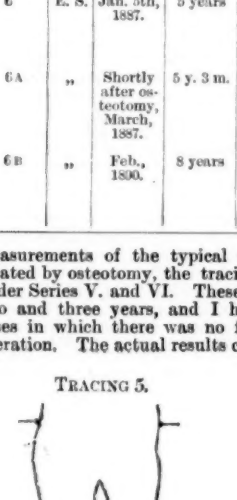
performed, both in rickety children and in adolescents. It is therefore of some importance to ascertain if there is any alteration in the growth of the limbs after operation. There is, of course, no question as to the immediate increase in stature, or rather in length of lower limb. In respect of the future growth of the limb, the outcome of inquiry into the after-history of the children operated on by me for genu valgum by linear osteotomy has brought no case to light of arrested growth which could be traced to that operation. Given here in tabular form are the records of

TABLE XII.—*Record of Knock-knee cases.*

No. of tracing.	Case.	Date of osteotomy.	Age.	Measurement from iliac spine to malleolus.	Distance between malleoli.
5	E. S.	Feb. 2nd, 1887.	6 y. 8 m.	R. Real .. .. 17·5; Apparent .. 16·8	7·3 in.
				L. Real .. .. 17·3; Apparent .. 16·3	
5A	„	Date of tracing, Feb. 17th, 1889.	8 y. 8½ m.	R. Real & apparent .. 20·0	
				L. Real & apparent .. 20·0	0·5 „
6	E. S.	Jan. 5th, 1887.	5 years	R. Real .. .. 14·2; Apparent .. 13·6	8·0 „
				L. Real .. .. 14·2; Apparent .. 13·2	
6A	„	Shortly after osteotomy, March, 1887.	5 y. 3 m.	R. Real .. .. 14·45; Apparent .. 14·30	2·0 „
				L. Real .. .. 14·70; Apparent .. 14·50	
6B	„	Feb., 1890.	8 years	R. Real & apparent .. 17·5	0·3 „
				L. Real & apparent .. 17·5	

measurements of the typical cases of severe knock-knee treated by osteotomy, the tracings of which are numbered under Series V. and VI. These have been followed up for two and three years, and I have notes of sixteen other cases in which there was no failure of growth after the operation. The actual results can be shortly stated.

TRACING 5.



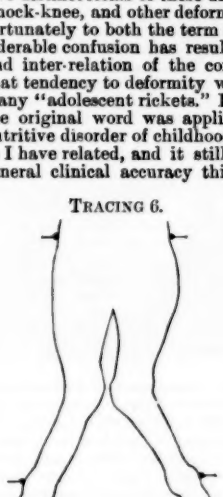
TRACING 5A.

E. S——, aged six years and eight months, had legs averaging about 17·5 in. long, separated about 7·3 in. by knock-knee. Two years after operation they were straight, and had grown 2·5 in., and increased in apparent length by the straightening to the extent of another inch.

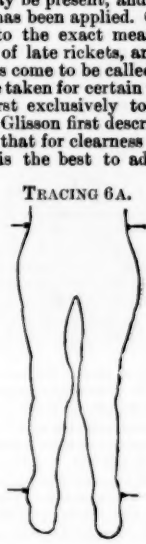
S——, five years old, had legs averaging about fourteen inches long, separated eight inches by knock-knee. Three months after operation the limbs were separated by two inches, and had grown. Three years later they were practically straight, and had increased in apparent length by more than three inches and a half, one inch being due to the straightening.

Speaking generally, cases of marked rickety knock-knee do not present themselves for treatment after the age of six or seven, slight cases of awkward shaky knees of course are common enough. But towards the later years of adolescence, before and after the occurrence of puberty, there is no doubt very frequently found a departure from healthy growth and nutrition of the long bones. There are two distinct forms of these disturbances, in both, bandy leg, knock-knee, and other deformities may be present, and unfortunately to both the term rickets has been applied. Considerable confusion has resulted as to the exact meaning and inter-relation of the conditions of late rickets, and of that tendency to deformity which has come to be called by many "adolescent rickets." It may be taken for certain that the original word was applied at first exclusively to the nutritive disorder of childhood which Glisson first described as I have related, and it still seems that for clearness and general clinical accuracy this plan is the best to adopt.

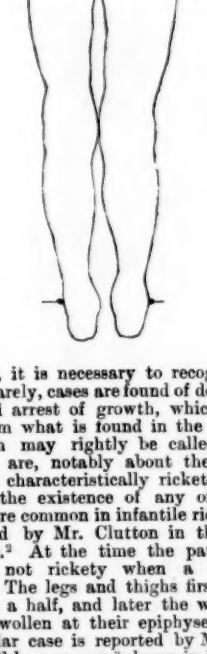
TRACING 6.



TRACING 6A.



TRACING 6B.



But if we do so, it is necessary to recognise that sometimes, but very rarely, cases are found of deformity deficient of nutrition, and arrest of growth, which can hardly be differentiated from what is found in the rickets of childhood, and which may rightly be called late. Certain differences there are, notably about the head, which is never, I believe, characteristically rickety, while there is no evidence of the existence of any of the abdominal troubles which are common in infantile rickets. A typical case was reported by Mr. Clutton in the St. Thomas's Hospital Reports.[2] At the time the patient was twelve years old, was not rickety when a child, and was 4 ft. 3½ in. high. The legs and thighs first became bandy at ten years and a half, and later the wrists, knees, and ankles became swollen at their epiphyses; the ribs were beaded. A similar case is reported by Mr. Pitts. Then Dr. Drewitt's well-known case,[3] shown in Nov. 1880, at the

[2] Vol. xiv., 1884.

[3] Brit. Med. Journal, June 30th, 1880. Edinburgh Med. Journal, Jan. 1890.

Pathological Society at the age of ten, who died eighteen months later, and whose skeleton was pronounced to be rickety by a committee of that Society. In our museum there are two skeletons showing this condition, one of which I here show. The museums of St. Bartholomew's, King's College, and the Middlesex Hospital also possess specimens. I have only myself met with one case in which the rickety appearance was well marked. The disease commenced at the age of thirteen. There seems, therefore, to be no reasonable doubt that cases do occur in which arrest, characteristic epiphysial changes, and curvature of bones which can hardly be distinguished from those of rickets of infancy and childhood. To these the term "late rickets" may rightly be applied, but they are exceptional and rare. The adoption of the term "adolescent rickets," which has been lately used to express a well-known fact—namely, that about puberty there is a tendency to curvature of long bones, often with pain at the epiphyses, bandy-leg, and especially of knock-knee and flat-foot—is, I think, an unfortunate one, although we owe the suggestion to a great authority, Professor William Macewen. It is difficult to see what these cases have in common with any form of rickets. There is no arrest of growth, or beading of the ribs, or any such enlargement at the epiphyses as we have recognised before. It will probably be clinically far more correct to group all these cases of deformity at puberty under the same head, or as being more nearly allied to cases of lateral curvature, which, developing at this time, have long been recognised not to be rickety in nature. They have in common age, rapid growth, and great capacity for improvement under manipulation, and the employment of regulated muscular exercises.

The extent to which the word rickets may be stretched in connexion with these deformities of puberty, and even later, was a very marked feature in the discussion on rickets at the meeting of the Medical Association at Glasgow in 1888, where it was suggested that lateral curvature itself should be grouped as a form of adolescent rickets, and little attention appeared to be given to the many and serious differences which exist between the well-marked disease of rickets of infancy and childhood, or even the rare true late rickets of puberty, and the somewhat miscellaneous collection of malformations of the limbs and trunk, often attended with overgrowth, with muscular feebleness and relaxation of ligamentous tissues, but rarely if ever with arrest of growth, and show no tendency to spontaneous recovery. But though these curvatures do not grow straight of themselves, even in the slighter cases, they are amenable to treatment by arrangements for partial restraint and support, as by splints &c., much in the same way as the truly rickety cases in early life are, and bathing, shampooing, &c., are as useful now as ever. The results of these mechanical methods are, however, now stated by an increasing number of surgeons to be less satisfactory than the improvement which regulated muscular exercise, properly directed, will effect. The arguments in favour of so treating flat-foot and knock-knee, which are urged by Mr. Ellis and others, are very strong; but the question is still to be settled as to the amount of confidence with which a cure of, for example, a severe knock-knee can be effected from muscular education alone. On the other hand, in severe cases, osteotomy by linear section for curved femora, for knock-knee, and for lateral tibial curves are all operations which are safe and efficient. Anterior tibial curves are, fortunately, not common in any severity, in these later deformities.

AT Worship-street Police-court on Wednesday the owners of sixty-two houses situated in Bethnal-green were summoned by the sanitary authorities for permitting nuisances on their premises. Among the nuisances complained of were defective drains, dirty and damp rooms, leaky roofs, stagnant pools of water in badly paved yards, and insufficient watercloset cleanliness. The magistrate made orders for the fulfilment of the work required.

RIVER POLLUTION IN LANCASHIRE.—At a conference held at Preston on the 21st inst. of the Health Committee of the Lancashire County Council, and of the various county boroughs in Lancashire, to constitute a joint board to carry out the provisions of the Rivers Pollution Act, so far as regards the watershed of the Ribble, it was resolved to constitute a joint board, the representation to be on the basis of rateable value.

ABRIDGED REPORT OF AN

Address

ON THE

ANATOMY OF THE CEREBRAL CONVOLUTIONS,

Delivered at the Meeting of the British Medical Association in Birmingham,

BY D. J. CUNNINGHAM, M.D., F.R.C.S.I.,
PROFESSOR OF ANATOMY AND SURGERY, TRINITY COLLEGE, DUBLIN.

MR. PRESIDENT AND GENTLEMEN,—I have selected as the subject of my address the field in which I have been most recently occupied, and to which my thoughts have been chiefly directed for the last two or three years. I refer to the fissures and convolutions of the cerebral hemispheres. In approaching the subject from the phylogenetic side, there is an overwhelming amount of material ready to hand. The brain of the ape is nearly as well known as that of man, and it has likewise been studied with an equal amount of care in almost every animal group. Further, the facts acquired in this manner have been compared and checked by the evidence afforded by ontogeny, or by the study of the developing brain. It must be admitted, however, that in the case of the primate brain this evidence is somewhat one-sided. Little or nothing is known of the manner in which the fissures and convolutions appear in the fœtal ape. In so far as the human brain is concerned, the material is very abundant; but the picture afforded is so variable that very different interpretations may be arrived at by different observers. Certainly it cannot be too strongly insisted on that it is only from large numbers of developing brains in each stage of growth that correct and trustworthy information can be gathered; and seeing that the development of the permanent fissures is compressed into the last four months of intra-uterine growth, there should be little difficulty in meeting this requirement. The law that ontogeny is a brief recapitulation of phylogeny, or, in other words, that the germ development is a compressed and shortened repetition of the stem development, is a generalisation which is now within certain limits universally admitted, and what is true for the organism as a whole is also true for the various parts which build it up; but when we apply this rule to the study of the cerebral convolutions, we are met with the difficulty that the two lines of evidence in many cases yield us what appear to be contradictory results. There is a general consensus of opinion amongst anatomists that the fissures and convolutions of the primate brain are arranged according to a pattern which can be compared with the arched fissures and convolutions of the carnivore brain, and yet it must be admitted that the ontogeny of the human brain affords us no assistance in our endeavours to detect in what particulars the carnivore pattern is repeated in the primate cerebrum. The ontogenetic and phylogenetic evidence is apparently at variance with each other; the whole chapter before the primate stage (if, indeed, such a chapter ever existed) is as it were entirely effaced, or at least so blurred and shortened that it is impossible to recognise any trace of it. But are we sure that the phylogenetic chapter which we expect to be repeated in the ontogeny of the primate brain had ever really any existence? Are we right in trying to compare all convoluted brains with each other, seeing that an increase in the body weight of an animal produces a stronger development of the furrows and convolutions without necessarily giving rise to a higher brain organisation? In some of the smaller forms of apes, for example, the brains are smooth, and yet on account of this we do not give them a lower place in the organic scale. Further, before we seek to detect homologies between the furrows and convolutions of two different animals, should we not in the first instance hold it as an essential that the animals under consideration be descended from a stem form or common ancestor with a more or less convoluted brain? But this is not the case with the primates and the carnivora. These two groups have, in all

probability, been derived from a stem form with a smooth brain, and the furrows and convolutions in the brain of each are the product of an after-development. Might we not fairly ask whether the different convolution type in each is not the result of this? Jelgersma, of Meerenberg, has recently advocated these views with great ability, and there cannot be a doubt that a great deal can be said in support of them.

It appears to me, however, that the physiologists will have something to say on the other side. In a smooth cerebrum the same leading functional areas are doubtless present as in a convoluted cerebrum, and, although similarity of function is altogether inadmissible as a factor to be considered in the determination of homologies, it is not unlikely that these areas are really in a certain sense homologous in both. About the third month in the development of the primate brain, when the cerebral wall is little thicker than the skull capsule which encloses it, a rich series of transitory fissures make their appearance. In six weeks these furrows, with two, or it may be three, exceptions, are completely obliterated, and the cerebral surface again becomes smooth preparatory to the formation of the permanent sulci. For a short time I thought that it might be possible to establish a connexion between these temporary fissures and the convolution type of the lower mammals, but in this I was completely deceived. They have an altogether different significance, and in all probability they are peculiar to the primate brain, in which they mark a distinctive and curious stage of growth.

But to pass from the lower mammals, and to confine our attention to the primates, let us consider how far the convolution type of the ape's brain corresponds with that of man, and how far the differences which exist can be cleared up by the light which is thrown on the question by ontogeny. Putting aside the great advance in the development of the lower part of the frontal lobe in the human brain, a development which leads to the complete formation of the speech centre, we find that all the principal fissures and convolutions in the primate brain show a more or less precise homology with each other. The differences which do exist are of a twofold nature, namely—(1) a greater richness of secondary furrows and convolutions in man; and (2) a marked tendency in the human cerebrum towards the breaking up of the principal fissures into two or more component parts by the formation of deep or superficial annectant gyri. The secondary furrows of the human brain do not make their appearance until the last month of intra-uterine development, and are only completed in the first month of infancy. This would seem to indicate that they are, comparatively speaking, a recent acquisition by the stem form. The disruption of the principal fissures, however, by annectant gyri shows itself in the earliest stages of the development of these sulci, and is therefore to be regarded as a deep-seated and important distinctive character of the human cerebrum. Such being the case, I may be allowed to develop this aspect of the subject a little more fully, and for this purpose we shall choose as examples two of the radial "Primärfurche"—namely, the fissure of Rolando and the intra-parietal sulcus of Turner. If the lips of the fissure of Rolando be widely separated from each other a distinct deep annectant gyrus will in many cases be observed to cross its bottom, and thus partially cut off its upper third. In certain rare instances this gyrus has been observed to come to the surface and completely break up the fissure of Rolando into two portions. Such a condition, for example, was present in the cerebrum of the celebrated physician Fuchs. In no ape, with the exception of the chimpanzee, and to a less extent the ourang, can this deep annectant gyrus be seen. But the intra-parietal sulcus affords us a more striking example of the disruption of a primary fissure. In the ape this is a long continuous sharply-cut fissure, whilst in man it is broken up into two, three, or even four pieces by the development of deep, or in many cases, superficial gyri. Wernicke held that these deep annectant gyri were peculiar to man, but this is not the case. Even in the baboon I have noticed one in the bottom of the intra-parietal sulcus at the point where in man the ramus occipitalis becomes cut off; and in the chimpanzee one or even two are not infrequently found in the same fissure at points similar to those in which they are developed in the human brain.

I have said that this is a deep-rooted distinction between man and the man-like apes on the one hand, and the lower apes on the other hand, and one which is not bridged over by the condition present in the fœtus. But upon this point it is impossible to speak too cautiously. As I have mentioned, we have little or no information regarding the manner of appearance of the fissures in the fœtal ape, and it is naturally in the earlier conditions of the two forms that we would expect the greater degree of approximation. Still, anyone who studies closely the material at present at our disposal must come to the conclusion that the difference between the human and the ape brain, in so far as the primary fissures are concerned, is distinctly emphasised in the fœtal condition, or, in other words, that the developing human brain is further removed in this respect from the ape type than that of the adult. The more usual mode of development of the principal fissures of the human brain, and more particularly the intra-parietal, is not in the form of a long continuous groove, or groove which lengthens out from one or other or both ends, and in the bottom of which annectant gyri make their appearance later on, but in the form of distinct and isolated pieces. Indeed, it is not infrequent for the two most distant parts of a fissure to show first, and for the intermediate portions to develop later. All this has a most important bearing upon the development of the annectant gyri, which are so distinctive of the higher brain organisation. The bridges of brain cortex which intervene between the isolated portions of a developing fissure are ultimately borne down as the pieces run into each other; but they are not, as a rule, completely obliterated. In the bottom of the fissure they still show as deep annectant gyri. In some cases, indeed, they prove an efficient barrier to the junction of two adjacent portions of a developing fissure, and then they form superficial gyri. I do not say that this is the way in which these interrupting gyri invariably arise, although I believe it to be the chief and most important mode of development. It is a dangerous thing to draw conclusions regarding development from the condition present in the adult; still I cannot help entertaining the idea that were the ontogeny of the ape's brain known, we should find in the chimpanzee and ourang, and probably also in the gorilla, a tendency exhibited towards the interrupted or human mode of development, whilst amongst the lower apes the continuous method would hold good. The straight continuous fissures of the latter, with their smooth walls and uniform depth, all point to this.

But I have set myself another task in this address, and that is to discuss the influences at work in producing the furrows and convolutions on the surface of the cerebrum. Many theories have been advanced to account for these. By some observers they have been regarded as being due to the influence of mechanical forces operating on the brain from without; by others they have been considered to be the effect of different degrees of growth tension acting on the surface of the cerebrum from within. Two widely different forces have been thought to exercise a mechanical influence upon the surface of the growing cerebrum—namely, the bloodvessels and the enclosing skull capsule. But the advocates of these views are by no means agreed as to the precise manner in which the external influence is applied. So far as I am aware, there is no anatomist who maintains that the entire fissural system is the result of the pressure exercised by bloodvessels on the surface of the growing cerebrum. It is true that there is a general correspondence to be noted between the course of the bloodvessels and the fissures of the cerebrum, but the former have absolutely nothing to do in determining the existence of the latter. Were this the case, the largest vessels would always occupy the deepest furrows, and in all cases they would lie at the bottom of the furrows. As we very well know, however, neither of these conditions is present. Again, if we follow the branches of the middle cerebral artery, we perceive that they are placed sometimes between the lips of a fissure, whilst at other times they pass across the surface of the convolutions. But, as Schwalbe has pointed out, the strongest argument against the theory is to be found in the cerebellum. There cannot be a doubt that the same causes which are responsible for the production of the cerebral sulci must also be responsible for the formation of the cerebellar fissures, and yet, in the case of the cerebellum, the larger vessels do not occupy the fissures, but are placed on the surface of the organ. None of these markings produced on the surface of the cerebrum by bloodvessels

can be classed as true cerebral sulci, and therefore we dismiss the constricting influence of vessels as being altogether outside the sphere of the causes which operate on the brain in the production of the convolutions. But quite recently the vascular theory has received a new and important development in a totally different direction at the hands of Dr. Richter of Dalldorf. This author argues with much ingenuity that the furrows on the surface of the cerebral hemispheres are produced by the movements of the fœtal brain. During the heart systole the passage of the blood into the minute twigs of all the bloodvessels causes the brain to swell up from the base of the cranium in a centrifugal direction by squeezing out the cerebro-spinal fluid from the interior of the ventricles. The borders of the brain are thus pressed into all the recesses of the skull cavity, and the organ receives a concussion which travels in an inward direction upon the surface of the hemispheres. Richter compares this concussion to the waves or ripples which may be generated at the borders of a vessel filled with water. In such a case, however, the waves are raised towards the outer surface, and each draws itself further away, whilst in the case of the brain the influences produced by the molecular concussions of the brain deviate inwards, and along their lines of meeting they become broken and annulled. Richter believes that a disturbance of the surface growth of the cerebrum is the result. He argues that in the stable existence of these interference lines the cells of the ganglionic layer are not all placed in equally favourable circumstances in so far as their growth tendencies are concerned. Those which lie in the lines of interference, or, in other words, in the lines in which the molecular concussions are broken, will suffer a check to their growth. Through this arrest the furrows arise.

It is impossible to do justice to this theory in the short notice which I am able to give it, but as an illustration I may briefly point out the manner in which Richter believes the fissure of Rolando to be formed. He regards this fissure as being, as a rule, the "first expression of the collective pulsatory concussions of the lateral surface of the cerebral hemisphere." Its oblique direction is due to the fact that the concussions, which travel along the medial border and which give rise to the upper end of the sulcus, are not interfered with until they reach the parieto-occipital and calcarine infoldings, whilst below they are early called to a halt by the fore-part of the Sylvian fossa. Richter asserts that if we were to obliterate the parieto-occipital fissure and the Sylvian depression, the fissure of Rolando would proceed perpendicularly downwards from the mid-point of the medial border of the hemisphere.

I shall not pause at this stage to criticise this theory at any length. It is open to an unanswerable objection which affects it in common with all other explanations which represent the fissures and convolutions as the product of mechanical influences operating upon the brain surface. As bearing specially on this view, however, I would urge that if the interference lines of the concussions are so stable as Richter would seem to imply, the various furrows should make their appearance in regular sequence, and always in the same manner. This we know to be very far from the case. There is the greatest variability in the order in which the furrows appear, and in general also they do not follow a uniform plan of development. The character and the direction of the concussions must, further, to some extent be influenced by variations in the arrangement of the main bloodvessels at the base of the brain. Anomalies of this kind are by no means rare, and yet it has never been pointed out that they are associated with any disturbance of the convolutionary type.

Meynert shows that the form of the head in different mammals exercises a marked influence upon the direction assumed by the convolutions of the brain. To render this clear, I may be allowed to quote the results which he obtained for the fox, the lion, and the elephant. In the fox the cranial cavity is more elongated than in the others. It presents a cephalic index of 77, and in accordance with this the cerebral fissures run more distinctly in a longitudinal direction than in the lion, which presents a cephalic index of 98·7. The elephant shows a striking degree of hyperbrachycephaly; its cephalic index amounts to 123·3 in the adult animal and 128·3 in the young animal, and in its cerebrum the convolutions and furrows assume an almost vertical direction. Further, Calori, Meyer, and Rüdinger have called attention to the fact that even in the human brain a relation between the form of the head and the direction of the cerebral furrows may be traced. This is, indeed, an undoubted fact, and one which can be readily established by anyone who examines the brain *in situ*. The fissure of Rolando lends itself specially to such an investigation. In brachycephalic heads the angle which it forms with the mesial plane opens up, whilst in dolichocephalic heads it becomes more acute. More recently Zuckerkandl has endeavoured to prove that early synostosis produces a change in the arrangement of the furrows, and that not only the skull and its several segments but also the cranial sutures have an influence in this direction. That the initial cause of the formation of the cerebral furrows is to be sought for in a restraint upon the surface growth of the cerebrum I would deny in the strongest terms. At the time when the first permanent cortical fissures appear, the cerebrum lies loose within the cranial cavity, and does not completely fill it. Ecker pointed this out in his classical memoir upon the development of the cerebral fissures; and it is a fact which I have had many opportunities of verifying. But certain observers have endeavoured to explain the formation of the cerebral convolutions by influences operating upon the surface of the hemispheres from within. The theory advocated by Wundt is one of the most notable of these. Different intensities of growth in stated directions, leading to surface tension of the cerebrum, is the explanation which he offers. To illustrate this view, let us suppose that the smooth surface of the fœtal brain is growing more rapidly in the sagittal than in the transverse direction. Tension of the surface in a transverse direction is thereby induced, and the cerebrum becomes transversely folded in accordance with the direction of strongest tension. Longitudinal furrows, on the other hand, arise if the transverse surface growth outstrips the longitudinal growth, and, as a consequence of this, the surface tension assumes a sagittal direction. According to Wundt, therefore, the direction of the developing furrows coincides with the direction of the most acute surface tension, or, in other words, stands at right angles to the axis of the greatest growth energy. Schwalbe is not too severe in his criticism of these deductions when he says that they are founded upon no positive proof, and, further, that they are directly contradicted by the fact that in dolichocephalic heads we have a preponderating tendency towards the formation of longitudinal furrows, and in brachycephalic heads a distinct tendency towards the formation of transverse furrows. If Wundt's views were correct, we should expect to find exactly the opposite.

We have now discussed several of the leading theories which have been advanced to explain the initial causation of the cerebral convolutions, and we have noted certain points in each which are open to objection. But, further, it is impossible to show by means of any of them how it comes about that small animals have smooth brains and large animals convoluted brains; how, in short, we should find in the beaver, an animal remarkable for its intelligence, a cerebrum almost entirely smooth, and in the sheep, an animal, shall we say, remarkable for its dulness, a high convolutionary system. Or, to take a still more striking instance, why in a cetacean we should encounter a cerebrum perfectly bewildering in the complexity of its convolutions, and in the little marmoset monkey a brain that is practically without gyri. It was Dareste who first called attention to this striking contrast between the brains of small and large animals, and he showed that it was quite independent of class relationships.

Within the last year Jelgersma of Meerenberg has developed a theory which appears to meet the difficulty. The grey cortex of the brain, which in members of the same species maintains a tolerably constant thickness, increases by surface extension. Further, with every advance in the growth of the grey matter there must be a proportionate increase of the subjacent white matter, the conducting fibres with which it stands in connexion. Now if we extend the surface of a smooth-brained animal, say, four times, and at the same time desire to keep the surface even, we must provide eight times as much white matter to fill the interior of the grey capsule; or, to put it in different terms, if we lengthen out the radius of the cerebrum, say, ten times, we acquire a surface extension 100 times greater, and an internal capacity 1000 times greater. The geometrical law involved is simply this—that in the growth of a body the surface increases with the second, but the interior with the third, power of the radius. From this it is evident, seeing that the pro-

portion of internal white matter and external grey matter is in all cases a uniform one, that in the evolution of a large animal out of a small animal a disproportion between the grey capsule and the white core of the cerebrum must result. This is compensated for by the extended cortex placing itself in folds or puckers, and thereby reducing the capacity of the capsule to a degree which brings it into correspondence with the white contents; consequently "the formation of the convolutions and furrows is simply the result of the tendency on the part of the superficial layer to increase by surface extension, and of a mutual space accommodation ('Raum-accommodation') of the grey substance and of the white conducting paths."

It is but right that I should state that many years ago Baillarger arrived at very similar conclusions; and, further, that the theory in question has received independent testimony in its favour at the hands of my colleague, Professor George F. Fitzgerald. Some months ago, having constantly had occasion to appreciate the unsatisfactory nature of the current explanations as to the origin of the convolutions, I detailed to Professor Fitzgerald, as far as I could, the conditions of cerebral growth, and asked if he could account for the presence of the cortical furrows upon geometrical principles. The views which he advanced were identical with those of Baillarger and Jelgersma.

It may be said that the explanation which we have given is merely another way of stating what has so often been urged in regard to the surface of the brain—namely, that the furrows are produced by linear arrests of growth, and that the convolutions are formed by exuberant growth in the intervening districts. In a certain sense this is perfectly true, but I think that it will be admitted that two very essential points are added. In the first place, a reason has been given which indicates the influences at work in determining the convolutions; and, in the second place, an argument has been advanced with the view of showing that the pattern sketched out has, in all probability, a deep physiological significance. Mr. Hill, in his masterly translation of Obersteiner's work, "On the Anatomy of the Central Nervous Organs," gives expression to a similar opinion upon the functional value of the furrows and convolutions. He puts the matter in such an admirable manner that I feel constrained to quote the passage. He says: "No question in the comparative anatomy of the brain concerns the neurologist more closely than the question as to the morphological value of the fissures. Are they merely plaitings of a shifting surface, or are they boundaries of morphologically distinct organs? A study of the development of the fissures in the brains of animals which stand far apart in phylogeny teaches that they appear with such regularity as to sequence and progress in extension and obey such definite rules as to depth as would, in the case of other parts of the body, justify us in considering them as the divisions between structures of separate function."

ON CHOREA.

BY T. W. JENKINS, M.A., M.D.

"Species convulsionis quædam est. . . . ab humore aliquo in nervos irruente quorum irritatione istiusmodi motus præternaturales producuntur."—SYDENHAM.

THE problem of the pathology of chorea has been obscured by at least three circumstances—(1) the refusal on the part of many writers to regard reflex irritation as a possible cause of the malady; (2) the insistence upon its alleged relationship to rheumatism; (3) the assertion that endocarditis is of frequent occurrence in chorea. Not one of these can be justified. Numerous examples of chorea due to reflex irritation are scattered through medical literature. It has been shown both by Dr. Gowers and Dr. Sturges that in comparatively few instances is chorea found intimately associated with rheumatism. And, lastly, no evidence has yet been adduced to prove that endocarditis occurs in uncomplicated chorea. It is not surprising to find that the exciting causes of chorea furnish a theme for the expression of the most contradictory opinions. No two authors give them alike. "The only immediate cause," says Dr. Gowers, "that can be traced with any frequency is emotion, usually fright, rarely mental distress."[1] Dr. Broadbent, on the other hand, asserts that this influence has been much exaggerated.[2] According to Bristowe, rheumatism, especially when "attended with pericarditis or endocarditis, must be regarded as at least one of the most efficient of the determining causes of chorea."[3] That very few cases, if any, can be referred to this source seems almost certain from the careful investigations of Dr. Sturges; and Dr. Gowers emphatically asserts that "it is impossible to regard chorea as the result of acute rheumatism."[4]

Pregnancy, by almost universal consent, is an occasional exciting cause of chorea. Few writers now consider it simply as a predisposing condition. But with regard to the causal influence of all other forms of peripheral irritation, the greatest difference of opinion exists. Many cases of chorea due to the presence of round worms are recorded by Davaine. Leuckhart and Cobbold[5] also recognise the possible connexion between the two conditions. Sir Thomas Watson admits that in some few instances chorea seems to depend on the presence of worms, and advises the administration of oil of turpentine in chorea "whether there be worms at the bottom of it or not."[6] Dr. Tanner speaks of worms as well-recognised causes of chorea.[7] According to Trousseau, on the other hand, they "stand to chorea in a very doubtful relation of cause and effect";[8] while Broadbent affirms that cases of chorea due to worms "must be extremely rare",[9] and many writers, among them Bristowe, do not refer to them at all. Rilliet and Barthez[10] ignore a large number of recorded cases, but admit, apparently reluctantly, two cases which seemed beyond all doubt due to worms. Other forms of peripheral irritation—e.g., disorders of menstruation, dental irritation, injury to spinal nerves, head injuries, &c.—are freely admitted by older writers among the causes of chorea. Dr. Gowers, however, attributes the operation of all such solely to the emotional disturbance which is wont to accompany them. Very little, he concludes, is known of the influence of reflex irritation.[11] To Dr. Dickinson, on the contrary, "various forms of irritation, mental and reflex, belonging especially to the nervous system," are one of the two great sources of chorea, the other, in his opinion, being the rheumatic condition. (Quoted from Bristowe, loc. cit., p. 1083.) Still less surprising is it to find corresponding contradictions in the various theories which have been propounded. It is needless to refer to them here. Suffice it to say that each is based upon some one element of chorea to the exclusion of others of equal, perhaps greater, moment; and that consequently none satisfies all the conditions of the problem of the pathology of chorea.

Before attempting to suggest a new way of viewing chorea, whereby the various symptoms may be correlated and brought into close connexion with each other, I would institute a comparison between chorea and another functional disease of the nervous system—viz., migraine. It would seem at first sight that no two diseases could differ more from one another than chorea and migraine; yet on closer examination it will be found that in many points they present strong analogies. The well-marked influence of age on the development of chorea is hardly less striking in migraine, while that of sex is only less so. Hereditary predisposition is potent in both; and the relation, whatever be its nature, of chorea to rheumatism is exemplified in that of migraine to gout. Both diseases are paroxysmal in character, the one "exploding" in pain, the other in motor disturbance, and the symptoms in each case are mainly unilateral. Gastric derangements are common to both, and may be exciting causes. Sensory disturbances, frequent in migraine, occasionally occur in chorea; while motor disturbances, the leading feature of the latter, are occasionally found in migraine, and in both cases display a strong predilection for the more highly developed muscles. Finally, both diseases are prone to recur.

Two principal theories have been propounded to account for the phenomena of migraine. The one regards it as due to a disorder of the cerebral cells leading to secondary interference with the cerebral circulation; the other as due to a

[1] Diseases of Nervous System, vol. ii. p. 549.

[2] Quain's Dictionary of Medicine, article Chorea.

[3] Theory and Practice of Medicine, fifth edition, p. 1073.

[4] Loc. cit., p. 572.

[5] Parasites: a Treatise on the Entozoa of Man and Animals, p. 321; also Quain's Dictionary of Medicine, article Round Worms.

[6] Principles and Practice of Physic, fourth edition, vol. i., p. 677.

[7] Practice of Medicine, seventh edition, p. 506.

[8] Clinical Medicine: Sydenham Society's Translation, vol. i., p. 396.

[9] Quain's Dictionary of Medicine, article Chorea.

[10] Maladies des Enfants, second edition, vol. iii., pp. 879-80.

[11] Loc. cit., p. 575.

primary derangement of the vaso-motor centre. The latter, notwithstanding the arguments which have been brought against it, seems the more probable. I would suggest that a similar explanation may be given of chorea. That the primary change affects the vaso-motor centre, or centres, and that the muscular movements are due to secondary vascular disturbance interfering with the nutrition of the cortical cells—recent physiology points to the cortex cerebri, not to the corpus striatum as affected in chorea,—thereby rendering them liable to take an abnormal and, as it were, independent action (a predisposition in this direction being assumed); and that, on this hypothesis, all the other symptoms of chorea admit of harmonious explanation is, I think, rendered probable by the following considerations:—

1. As regards the *cardiac phenomena* of chorea. Irregularity and acceleration of the heart's action are better explained on the assumption of deranged innervation than by referring them to some morbid cardiac condition, of which there is no evidence. That a cardiac murmur can be referred to the same source has been denied, although its occurrence in such a disease as exophthalmic goitre can hardly be explained on any other hypothesis. Assuming, however, that cardiac innervation is in some way disturbed in chorea—and early irregularity at least points in that direction,—there is another element present, hitherto, so far as I am aware, unnoticed, which makes the occurrence of a murmur extremely likely. Chorea is a disease mainly of that period of life when the body itself is in a state of growth. In this the heart, like all other organs, shares; but unlike other organs (with the exception of the blood-vessels and the brain), the growth of the various parts of the heart does not proceed *pari passu*. The increase in weight is mainly confined to the ventricles, for the auricles lose in proportion to the ventricles up to the period of completed development of the adolescent,[12] and it is during this very period that chorea mainly occurs; and though it occurs after adolescence, the heart is then rarely affected. That the great strain thrown upon the left ventricle by the excessive muscular movements of chorea, along with irregular arterial action in the cerebral circulation, should result in occasional regurgitation and the development of a murmur seems not improbable.

2. *The respiratory phenomena of chorea.*—Little attention has been paid to the respiratory symptoms which all admit to occur in chorea. They cannot in every case be referred to irregular action of the thoracic respiratory muscles. It is much more probable that they, too, are dependent upon deranged innervation, the diaphragm being immediately affected; and as the respiratory centre is closely connected with that which controls the heart and bloodvessels, there is in and around the vaso-motor centre in the medulla oblongata a focus, interference with which may directly occasion the cardiac and respiratory, and indirectly the motor and other, phenomena of chorea.

3. *Cessation of choreic movements during sleep.* — This feature is eminently characteristic of chorea, being, in fact, rarely absent. That some change affects the cerebral circulation prior to the supervention of sleep is certain; that this change is closely connected with a variation in the blood-pressure is highly probable. One may well suppose that the cessation of the choreic movements is due to the same vascular change, pointing again to their dependance on some affection of the vaso-motor centre.

4. *The effects of treatment.*—It is beyond doubt that the removal of a palpable source of irritation may be followed by speedy cessation of chorea. In all such cases it is probable that the result is due to a decided lowering of the blood-pressure—i.e., to a change originating in the vaso-motor centre. Chorea has also yielded to large doses of chloral. In a well-known case which occurred in Glasgow a choreic patient took sixty grains of chloral, profound sleep verging on coma being induced; but with awakening there was no return of the chorea. In another case, which also occurred in Glasgow, thirty grains procured the removal of the disease. Several instances have also been recorded where chloroform narcosis brought the affection to an end. That these drugs influence the vascular system is well known. According to Whitla, the action of chloral is directed against the vaso-motor centre, and brings about a fall in the blood-pressure. Sir Thomas Watson records a case where chorea was checked by sudden fright. That in such circumstances the vascular system is strongly affected is in the experience of everyone. The results which have been recorded by Professor M'Call Anderson and others from the treatment of chorea by antipyrin point, I think, in the same direction—viz., that irregular vascular action is mainly concerned in the causation of chorea, as also of migraine (against which antipyrin is so potent); the consequent phenomena in each case being determined by the greater or less predisposition of certain cerebral centres, motor, sensory, or psychical, to take on abnormal action.

5. *Post-mortem evidence.*—Dr. Dickinson's investigations go to prove the profound implication of the vascular system in fatal cases of chorea. His comparison of the disease to diabetes loses somewhat of its singularity on the above supposition.

6. *The exciting causes of chorea.*—If it be true that fright is by far the most common excitant of the disease, we have therein another argument for referring the phenomena of chorea to deranged action of the vaso-motor centre. It is highly improbable that its influence is directed against the motor cells, which some assert, as these are not likely recipients of sensory impressions. Through whatever centres such impressions are conducted, it is fair to assume that the resting point is the vaso-motor centre. And with regard to all other forms of irritation, it is just as easy to believe that they affect the same centre as that they act directly on the cells of the cortex cerebri.

Finally, as regards the relationship between chorea and rheumatism, it is to be borne in mind (1) that there is nothing improbable in the coincidence of the two affections; (2) that rheumatism following chorea presents no difficulties when the *sui generis* nature of the former is considered; (3) that chorea supervening on acute rheumatism (some other cause operating—e g, fright), just as it sometimes follows scarlatina or measles, or small-pox, may be explained by the unstable equilibrium of the nervous centres, including the vaso-motor centre, which is so apt to follow on febrile disease.

Whifflet, Scotland.

[12] Heart and Bloodvessels in the Young, A. Jacobi, p. 5.

ON CATARACT OPERATIONS:

THE AFTER TREATMENT IN LIGHT ROOMS, AND BY AN ADHESIVE STRIP ON ONE EYE ONLY, THE EYE NOT OPERATED UPON BEING LEFT OPEN FOR THE COMFORT OF THE PATIENT.[1]

BY JULIAN J. CHISOLM, M.D.,
BALTIMORE, U.S.A.

THE object of this paper is to give the results of my experiences in the after treatment of cataract extractions during the past four years. Up to that time it differed in no respect from that universally adopted. Indoctrinated early in the belief that movements of any kind were prejudicial to an eye which had been freely opened for the removal of an opaque lens, I closed both eyes with care under compresses and bandages. I kept my patients on their backs in bed, and enjoined a passive state, with the avoidance of all unnecessary movements. Dark rooms were deemed an essential for successful treatment, and patients were secluded in them for two weeks. In other words, I carried out the universally restraining treatment without questioning its propriety.

All eye wards in hospitals have closed shutters to the windows, so that when cataract cases were under treatment all daylight could be excluded. In these black wards candles were necessary both for the convenience of attendants and for the professional visit. In the last few years a decided change has taken place in this regard. In many eye wards the inner shutters are no longer closed. The heavy compresses which still cover the eyes of the patients exclude all light. They are not affected by the admission of daylight, while the service is in every way benefited. There are a few over-cautious surgeons who still use dark rooms and candle service. They will be forced to yield to a more enlightened experience. Four years since I found one of my friends, Dr. Michel of St. Louis, using strips of adhesive plaster as a substitute for the compresses and bandages. His patients seemed to experience no bad results from the admission of a little light through the diaphanous material. He thought it more comfortable for his patients undergoing bed confinement not to have their

[1] A paper read before the Ophthalmological Section of the Tenth International Medical Congress at Berlin.

heads tied up. This was the old adhesive dressing of Desmarres, in general use by all eye surgeons prior to the introduction of chloroform, and before the vomiting which so often accompanies the administration of a general anæsthetic had exposed eyes operated upon to a new source of danger. When chloroform anæsthesia was accepted to prevent pain in cataract extractions, a more thorough protection of the wounded eye became necessary. Carefully adjusted compresses and bandages for the support of the eye against violent emesis was a potent item for safety during the after treatment. It was about this time, four years since, when cocaine, the local anæsthetic, had usurped the place of chloroform, and had therefore removed the dangerous element of vomiting during and after eye operations, that I found the strip of adhesive plaster in use by one of my friends. Under the new order of things, it appeared to me an especially good dressing, fulfilling in every way the requirements for the quick and complete healing of the corneal wound. I therefore commenced a series of experiments in this direction.

After a smooth cataract extraction has been completed inspection of the eyeball shows the lips of the corneal wound to be in perfect apposition. The eyelids are then closed, the perfection of an adjustment of the wounded surfaces continuing. The cartilage of the upper lid makes a perfect natural splint for the cut cornea, and the orbicular muscle keeps up a constant tonic uniform pressure over the whole eye. We feel that if these conditions could be ensured for one week only the very best results would be obtained. I found that a piece of adhesive plaster secured the most desirable condition. When it was properly applied it kept the lids firmly together. It made no irregular pressure on the wounded eyeball. It caused no inconvenience, and it could not be displaced. These were very attractive features which the light dressing seemed to possess. After a careful trial it proved itself to be a great improvement over the compresses and bandages which I had been using since 1866. For the past four years I have substituted this light dressing for the heavy one, and am so perfectly satisfied with the results that I would deem it a retrograde movement to go back to bandage eye dressings. Many ophthalmic surgeons have adopted this open dressing, as it is now called, at my suggestion, and they are enthusiastic in its praise. One application usually suffices for the entire treatment. If the slip is properly put on it will adhere firmly for one week, and a longer restraining treatment is not necessary after eye operations. The dressing consists of a piece of soft, salicylated, diaphanous, silk isinglass plaster, an inch and a half long by one inch wide. When the lids are closed after the completion of the operation, and the external surfaces moistened, the piece of plaster is laid upon the eye, extending from the upper edge of the superior tarsal cartilage to the chest. By a few strokes of the shell spoon it adjusts itself perfectly to the surfaces covered. Every lash is smoothed down and can be seen through the plaster, which covers nearly the whole width of the lid, leaving only the canthi exposed. Any excess of moisture is absorbed by the careful pressure of a soft towel. In a very few minutes the plaster dries. This light-coloured, flexible, silk isinglass plaster is prepared by Seabury and Johnson of New York, and can be had of Messrs. Weiss, instrument makers, of London, and becomes a permanent fixture. Through it the condition of the lids can be daily seen, and the character of the eye secretions examined, without removing the dressing. Medicated drops can find their way into the eye at the canthi, and the eye secretions can escape without detaching the plaster strip sufficiently to impair its efficiency. The perfect support given to the eyeball, without making the least irregularity in the pressure upon the eye surfaces, regardless of the movements of the wounded organ or of the head, can be obtained by no other application. Those who will use the adhesive plaster will now, under cocaine anæsthesia, find it an immense advance in the direction of a more perfect eye dressing. From its simplicity and its efficiency it must eventually supersede compresses and bandages after the most delicate eye operations for cataract extractions and iridectomies.

My next step in the direction of an advanced treatment was in the doing away with bed confinement. With the eye properly and permanently closed by converting the two lids, as it were, into one undivided septum, the perfect and constant support secured to every part of the eyeball ensures no disturbance of the lips of the wound, it matters not in which position the patient is put, whether on his back, his side, or his feet. This valuable dressing, in my experience, has also proved itself a luxury, as it has virtually allowed me to do away with all bodily restraints. The confinement in bed is an annoyance to many which it is well to avoid, if it can be done without danger. I found after close observation that the sitting up or the lying down under this dressing had no effect upon the condition of the eyeball, therefore, I no longer restrain cataract patients to the supine position. If immediately after the operation they prefer to sit in a chair rather than to recline upon the bed I can, without detriment to the eye, allow them to follow their own inclination. From my present standpoint of four years' experience in several hundred cataract extractions and iridectomies I deem bed confinement, especially with patients lying compulsorily on their backs, a needless precaution, often annoying and at times injurious. In the light rooms in which I now treat my eye cases an appreciable amount of light is transmitted to the eye through the diaphanous adhesive plaster. In the very early days of my experiments I found this not disadvantageous. The eyes, not absolutely in the dark, did not become as sensitive as when all light was excluded. I also observed that when, through stiffness of the eyelashes, or owing to the escape of an excess of eye secretions, the lash border was loosened a little from the adhesive covering, so that light could stray in to one or both eyes through the partially opened palpebral split, the eyes, when finally exposed by the permanent removal of the dressing, looked rather the better. They were less red, less watery, and less sensitive to light. This has been so often observed that now in cases of very heavy, stiff eyelashes, after the dressing is dry, when the patient remarks that he can clearly see the light through a crevase made by the slight separation of the lids, I still consider the strap well applied, and in such cases no longer attempt to close the lids more perfectly. It needs much faith on the part of anxious nervous patients to go through the very long week of blindfolding, counting the days, hours, and minutes before liberation when they hope to see. Bad enough as this is in those blind in each eye, it is vastly more so to those who still possess a useful eye. This confinement often deters a timid person from undergoing an operation for the restoration of sight. Knowing that a clean corneal wound will heal as rapidly as do wounds in any other part of the body, I became convinced that the eye not operated upon could be released, without detriment to the eye operated upon, at a much earlier stage of treatment than I had been in the habit of doing. It would often release the good eye when only one half of the confinement treatment for the one operated upon had been passed. This question finally presented itself to me for serious consideration. Was there really any advantage gained to the patient by the universal custom of closing the eye not operated upon, if the other be well supported? And if not, what an immense advantage the patient would secure by having it left open. An every-day experience with the adhesive dressing had convinced me that the corneal wound was so perfectly supported and protected by it that no rotation of the eyeball would disturb it. I was disposed to believe that this protection would be continued even when free movements were permitted in the eye not operated upon. This, my next and most important modification in the after treatment of cataract extraction, was one that could only come from the courage of one's convictions. It was a direct attack upon the universally accepted belief that the movements of one eye necessarily imparted to the other must do injury to the eye operated upon, and that, therefore, both eyes must be kept quiet and necessarily closed.

After a smooth extraction with iridectomy, in a case of simple senile cataract in a healthy man of phlegmatic temperament, in every way a suitable case for the procedure, I made bold to leave the useful eye open, closing only the one operated upon with the adhesive strip. Regardless of the position of the eyeball in its rotatory movements, I believed that this light dressing would make no irregular pressure, and therefore cause no gaping of the corneal wound. I watched the course of this novel treatment with anxiety, knowing that I was going contrary to what was deemed most important by every eye surgeon. Fortunately for suffering humanity the case progressed as smoothly as if the most restraining treatment in bed, with both eyes bandaged, had been carefully carried out. The

final result was so perfect that I was induced to repeat the experiment in a number of cases until I was forced to the conclusion that I had needlessly restrained a great many patients to their discomfort.

Now I never close the eye not operated upon. My cataract patients are not restricted in seeing by undergoing an operation for cataract extraction. The sight which they had the day before the operation they continue to enjoy during the entire treatment. This revolutionary act in eye dressing has not only proved itself of immense comfort to the invalid, but has actually added materially to the rapidity of the convalescence; so that now I am able to liberate the eye operated upon as early as the fifth day, and in many cases have done so on the fourth. In one or two cases in which the adhesive strip had become detached prematurely at the end of the third day after operation, I found the corneal wound so perfectly healed that I did not reclose the eye. I now in cataract extractions leave the seeing eye open with the same confidence that I formerly had when I securely closed it up. An experience of over 400 cataract extractions has given me conclusive evidence that by this course of treatment I not only do the eye operated upon no harm, but, on the contrary, positive good. However forcibly we may theorise on this subject, the fact still remains that, in my experience, the movements of the exposed eye do not disturb injuriously the cut one. The corneal wound heals quite as promptly as when both eyes are shut. I have also found that the eye operated upon, and closed only by a diaphanous strip, has its final healing much advanced when, through the whole treatment, the other eye is exposed to moderate light. Neither eye then becomes over-sensitive, as when the dark treatment is followed. When the adhesive dressing is removed, on the fourth or fifth day, the eye operated upon will be found much less red, watery, and sensitive than when closely confined by heavy coverings. Convalescence, as a rule, will be so rapid that ten days after the operation patients can walk about the house without inconvenience from the light and without the desire for the protection of smoked glasses.

For the past two years I have operated upon all simple senile cataracts without iridectomy. I clean the anterior chamber as carefully as possible, and replace the iris so as to establish a round well-contracted pupil, with the lips of the corneal wound thoroughly adapted. A few drops of an eserine solution half per cent. strength are instilled into the eye operated upon. Both eyes are temporarily closed for the adjustment of the adhesive strip over the lids of the one operated upon. As soon as it dries it holds the lids very securely together. The patient is then told to open the other eye. The patient gets out of the operating chair, and, if he has sight enough in the exposed eye, walks unaided from the operating room to his chamber. He reclines on the sofa, sits upon or lies upon the bed at will. He eats his regular meals. At bedtime he undresses himself, and unaided makes his own toilet in the morning. He walks about the room, escapes the annoyance of being fed by the nurse, receives the visits of his friends, and in many respects is unrestrained in his movements. The diaphanous character of the dressing admits of the daily inspection of the lids. If no excessive discharge appears, there can be no trouble going on, and the dressing is not disturbed. As an additional security for pupillary shrinkage I instill at bedtime, on the day of operation, a drop of the eserine solution. It finds its way from the inner canthus under the plaster, and by capillary action gets on the cornea. This ensures the removal of the iris from the corneal wound, and tends to prevent prolapse. On the fourth or fifth day, when the adhesive strip is finally removed, I use locally atropia to expand the pupil. I remove the adhesive strip by detaching a corner and pulling the whole dressing off dry. Should the patient complain of the traction, the lids are moistened, when the adhesive piece comes off without effort. The eyelids are then cleansed of adherent secretions with warm water. The daylight of the room permits of a perfect examination of the eye. The corneal wound is found healed and the eye much less congested than when treated by the old method with heavy compresses, a proof that much of the irritability of the eyes, as seen after the usual method of dressing cataract cases, should be charged to the exclusion of light and not to the corneal wound. When the adhesive plaster has been removed on the fourth or fifth day the newly exposed eye needs no further protection. The eye not operated upon and never closed had all along accommodated itself to the moderate light of the sick chamber, from which only sunlight had been excluded; and the newly exposed eye, on account of the previous exposure of its companion, speedily does the same. In two weeks after operation the period at which cataract patients usually leave the hospital, very few need the protection of smoked glasses on going out upon the street. The majority go out without them. Prior to four years ago every eye operated upon and treated in the then dark wards of the hospital had to be supplied with smoked glasses, which the hospital authorities purchased by the gross. On account of the change made in the eye dressing, smoked glasses are no longer an article of hospital purchase.

In conclusion, I would say that my experience of the past four years in several hundreds of cataract and iridectomy cases has shown conclusively to myself and to a large number of professional friends who have adopted my methods that the leaving of one eye open for the comfort of the patient in no way detracts from the final success of the operation. Also that treatment in a moderately lighted room is conducive to a more rapid convalescence. Also that freedom from restraint and the varied movements of the patient have in no instance in my knowledge endangered the very large percentage of cures which we all individually are carefully studying to secure. In drawing attention to these radical changes in the after treatment of cataract extractions and other eye operations, I know that I am acting safely when I advise a trial of this new line of treatment, feeling assured that personal experiences, regardless of preconceived theories, will lead to the adoption of this better and more advanced method of treating cataract patients.

INFLUENZA: ITS CLINICO-PATHOLOGICAL ASPECT.

BY THOS. GLOVER LYON, M.A., M.D. CANTAB.,
ASSISTANT PHYSICIAN, VICTORIA-PARK HOSPITAL.

INFLUENZA, like all similar diseases, is viewed from three standpoints—that of the medical officer of health, of the pathologist, and of the practical physician. Under the first two heads probably nothing has been learnt from the late epidemic. The sanitary officer has failed to arrest its advance, or even to determine its mode of progression. The labours of the post-mortem examiner to detect any specific lesion in its victims, and of the bacteriologist to discover the ultimate cause of the disease, have been equally fruitless. When, however, we regard the disease from the practical physician's, or from what may be called the clinico-pathological, point of view, the case is quite different; the late experience has largely modified the opinions concerning influenza generally held, as far as this department of medicine is concerned. Although the list of symptoms handed down to us from former epidemics will serve perfectly well for the late one, they were arranged in such a manner that a month or more passed after the beginning of the visitation before the presence of the disease amongst us was universally acknowledged. The cause of this was not far to seek, for the disease was described as being chiefly incident upon the respiratory tract; in fact, observers were on the look out for a disease of the nature of a bad cold attended with an unusual amount of depression. The object of the following remarks is to show that the poison of influenza attacks chiefly the central nervous system, and that the damaged state of this tract is impressed upon all the phenomena observed in this interesting disease, and constitutes a connecting link between them. The importance of determining the parts of greatest incidence of a disease need not be insisted upon.

In a letter to Dr. Sisley, Professor Proust writes: "D'ailleurs les divers symptômes observés dans la grippe révèlent bien plus tôt un trouble nerveux général qu'un état d'inflammation franche."

1. The simplest form of the disease displays itself as follows: The patient suddenly finds himself incapable in mind and body; he is unable, except with the utmost exertion, to finish anything he may be doing, the slightest effort being followed by an extreme feeling of fatigue. Within a few hours follow intense pain at the back of the

eyeballs, in the head, and down the spine; pain and tenderness occur in various muscles, chiefly those of the back, neck, and calves. The pains in the head and back are peculiar; they are deep-seated and resemble those caused by concussion. Percussion of the spine, as Dr. Bezly Thorne points out, is painful; indeed it produces a deep-seated jarring sensation. Prostration (contrary to what was described formerly) is out of all proportion to the general severity of the disease. Now, except the symptom referred to the muscles, the above description points to one pathological condition only—i.e., a damaged state of the brain and spinal cord. The muscular pains in the symmetry of their position and the variability of their intensity suggest that they are myalgias projected from the nerve centres.

2. If the attack be more severe the symptoms referred to the central nervous system directly become more pronounced and numerous, and, in addition, symptoms referred to other parts of a very characteristic and interesting nature arise, and then we have the fully-developed disease. At whatever part of the body these symptoms occur they always possess certain qualities; they are symmetrically placed, their duration and intensity from moment to moment are exceedingly variable; they manifest, if on the surface, and indicate, if deeply seated, a congestion of the part affected and a disturbance of its functional and sensory condition; in other words, the outlying symptoms point to a loss of vascular, functional, and sensory tone, and not to true inflammation. If the part affected be a surface, hæmorrhage is likely to occur, and if the condition persist for a certain time a state approaching inflammation is induced, which when it affects a mucous membrane constitutes catarrh. If the nose be involved, we get violent sneezing, with suffusion of the nasal mucous membrane, and often of the surface of the head. This condition sometimes passes off in a few minutes, or remains in a slighter degree for an indefinite time, producing the coryza, which seems to have been more common in the epidemic of 1847 than in the late one. Epistaxis would naturally often occur. If the bronchial tubes are attacked, there is a rapid development of a feeling of tightness in the chest, with the occurrence of a spasmodic cough, ending in the expectoration of a little mucus tinged, perhaps, with blood. This condition, again, usually passes off after a few minutes, but sometimes remains for a longer time, causing bronchial catarrh. When the proper tissue of the lungs is affected there is a feeling of intense fulness in the chest, with lividity of the face and struggling for breath. These symptoms usually disappear with remarkable rapidity, but sometimes continue and become so severe as to cause death. The stomach very commonly displays symptoms due to loss of tone, there is violent vomiting with loathing for food, and great pain in the epigastrium, and often a little blood is vomited. This state usually clears up in a few hours. Referred to the central vascular system, we have temporary fits of præcordial oppression or pain, the latter sometimes intense. Symptoms of a similar nature to the above may occur, referred to almost every part of the body. A third class of symptoms sometimes arise which seem to prove that the vital centres do not escape the poison of the disease. The respiratory movements are often performed with greater effort than the local conditions will explain, and sometimes cease altogether. The pulse does not rise with the temperature, and there is sometimes great depression of the vascular system, suggesting involvement of the centre controlling its function.

3. Even in the complicated cases, when actual inflammation has occurred, there seems something superadded to the local lesion. Sir Peter Eade notes that the cases of pleurisy display more pain than is usual in ordinary pleurisy, and that the difficulty of breathing, when pneumonia has been established, is greater than the local mischief will explain.

4. During the tedious convalescence from the disease nervous symptoms are very persistent, as also is a general loss of tone of the body, slight causes producing disturbance out of proportion to their magnitude. There is often, as Dr. Wilks points out, a depression of the heart's action unexplained by local conditions.

With all these considerations in mind, it seems to me that the following pathological conception naturally suggests itself. Influenza attacks primarily and chiefly the central nervous system, hence arise three groups of specific phenomena:—1. Those referred directly to the nerve centres. 2. Those referred to other parts, consisting of loss of vascular functional and sensory tone, due to a damaged state of the tonic centres, in the central nervous system. 3. Those consisting of disturbances of the vital functions due to involvement of vital centres.

In conclusion, if the above views be correct, rest of body and mind would be specifically indicated in the treatment of influenza. Experience has amply proved this line of treatment to be the right one. The best advice was found to be, when practicable, "Thou art inclined to sleep; 'tis a good dulness, and give it way."

King-street, Cheapside, E.C.

NOTES OF A CASE OF PARAFFIN DRINKING.

BY S. W. CARRUTHERS, M.B.,
LATE RESIDENT PHYSICIAN, ROYAL INFIRMARY, EDINBURGH.

MRS. A. M——, aged thirty-six, came to the Royal Infirmary at 9.55 A.M. on March 15th, 1890. She stated that she had been drinking for a fortnight, and that that morning, while still not thoroughly sober, she had intentionally drunk a good half-cupful of paraffin oil. The time could not be accurately ascertained, as her clock had stopped, but it seems to have been before 6 A.M. After about half an hour had elapsed she began to suffer pain and to vomit; she vomited twice or thrice, a mouthful or two at a time, and on the first occasion she says there was more than a tablespoonful of blood in the vomited matter. (During the previous week she had had several attacks of vomiting, due to drinking, but no hæmatemesis and no pain.) The pain increased rapidly, and became so bad that she thought she was going out of her mind.

On admission, her hands and tongue were very tremulous; the tongue was distinctly red and glazed-looking at the tip and edges, and the dorsum covered with a thick white fur. The right pupil was somewhat dilated, the left normal; both reacted rather sluggishly to light. She complained of pain in the pit of her stomach. Temperature 98·6° F.; pulse 120. One-tenth of a grain of apomorphine was given hypodermically, and six minutes later she vomited about six ounces of matter, which emitted a strong odour of paraffin. It consisted almost entirely of yellow mucus floating in a golden-yellow fluid. She then drank a large cupful of water, and thereafter the dose of apomorphine was repeated; two minutes later she vomited material similar to the last, but diluted with the water just swallowed. There was no blood on either occasion. About midday she passed a scanty stool, consisting almost entirely of red blood. Her menstrual period had ceased normally almost a week before, but there occurred a slight return of the flow that day. At 1 o'clock she was ordered a simple warm water enema (a pint and a half), to be repeated after an hour's time. On each occasion the enema brought away a stool having an intense odour of paraffin, but containing no blood. She passed twelve ounces of urine, which also had a very marked odour of paraffin; by allowing the urine to stand, the paraffin was rendered visible, floating as a thick scum on the surface.

At 7 o'clock she complained of abdominal pain. Another warm-water enema was given, and brought away a stool without any blood; the odour of paraffin was present to a less degree than before. Shortly after this she passed forty ounces of turbid urine, lighter in colour, but with a marked odour of paraffin. The temperature at 4 P.M. had been 100·2°, but at 8 P.M. it was a degree lower. Mr. Charles Arthur, the dispenser to the Royal Infirmary, kindly undertook to distil ten ounces of the first sample of the urine, and ten ounces of the second. As the result of distillation and redistillation about 6 c.c. of pure paraffin were collected; and Mr. Arthur estimated that at least an equal quantity was lost in the process, owing to the want of sufficiently delicate apparatus. The two samples were kept separate during the first distillation, and it was found that the first contained about twice as much paraffin as the second; thus a total of at least 25 c.c. of paraffin must have been excreted by the kidneys.

At 9 o'clock the patient was found lying with her knees drawn up, complaining of severe burning pain, chiefly at the epigastrium. There was marked tenderness on pressure over that region, and over the left lumbar region; she said her abdomen was swollen, but it was not at all notice-

ably so. She was still vomiting occasionally, but no odour of paraffin could be detected in the small amount of mucus which was brought up. She could extend her legs, but said that she had less pain when they were drawn up. The exacerbations of pain produced a marked increase in the tremors of her hands. On taking the bedclothes off her abdomen to examine it, there was a distinct though not strong odour of paraffin from the skin. Her breath emitted a strong odour of paraffin. At a quarter past ten the abdominal tenderness was more general and more marked, so fomentations were ordered every two hours, and she was fed with warm milk given frequently in quantities of an ounce at a time. She had just been vomiting.

At 3 A.M. on the 16th the abdominal tenderness was less, though she was still lying with her knees drawn up to diminish the pain. The odour of paraffin from the breath was not so strong. She had not slept at all, and occasionally imagined she saw cats in the room. She said, however, that she had not slept the previous night either. She was still vomiting now and then, so fifteen grains of subnitrate of bismuth were given, which checked the vomiting for a time. At 5 A.M. she passed eight ounces of urine with a trace of paraffin odour, and a slight "greasiness" on the surface after standing. When she was seen at 11 o'clock the pain and tenderness in her abdomen were much less in degree, and had changed in character. The pain had become griping, and was situated near the umbilicus. The tenderness was in the right iliac fossa and lumbar region. She had not vomited since 8 A.M., and did not vomit again. Her breath, but not her skin, still had the odour of paraffin. Temperature 99·8°; pulse 110. About half an hour later she passed three ounces of dark-red urine, containing both blood and albumen copiously. In the afternoon the pain was much easier. She passed three ounces of dark-crimson urine, which gave a marked reaction with tincture of guaiacum, and contained half a grain of albumen and twelve grains and three-quarters of urea per ounce. At 11 o'clock that night she was sleeping quietly; her breath still emitted the odour of paraffin. By midnight her temperature was normal, and it did not rise much above normal again.

Half an hour after midnight (March 17th) she passed six ounces of ruddy, amber-coloured urine, which gave a slight reaction with guaiacum, and contained a trace of albumen and seventeen grains of urea per ounce. Shortly after midday she passed ten ounces of urine similar in colour to the last. Guaiacum showed a trace of blood, but there was no albumen; the urea was eighteen grains per ounce. Later samples showed neither blood nor albumen. The total urine passed on the 17th was twenty-eight ounces. In the afternoon the paraffin odour had gone from the breath, and there was only very slight tenderness in the abdomen, hypogastric in position. The tremors in the hands had almost gone.

On March 18th her bowels were moved, but there was no blood in the stool. That evening she needed a drachm of bromidia to procure sleep. During the day she passed only thirteen ounces of urine, containing almost twelve grains of urea per ounce. The next day the urine was practically normal again, both in quantity and quality. She was discharged on March 22nd. She had no feeling of illness, and was eating and sleeping well, her only remaining symptom being slight tremors.

Remarks.—Though paraffin drinking is not unusual, I have not been able to find records of many cases, and only one of them was suicidal, occurring during an attack of puerperal mania. The cases of which I have seen records show practically no symptoms beyond those due to more or less severe gastric irritation, except that in one the breath is said to have had the paraffin odour slightly next morning. The explanation seems to be that though in all the cases much larger doses were taken, emetics were given within an hour and a quarter at the longest, and thus probably less was absorbed. The chief interest in this case is in the excretion of the paraffin. A considerable amount of it was returned in the vomited matters; how much one cannot tell, as the patient had vomited before admission; some also passed off (either directly or by absorption and re-excretion) by the bowel. The rest was apparently absorbed into the blood unchanged, and must have been chiefly eliminated by the kidneys, but also by the lungs, the skin, and even apparently by the uterine mucous membrane, for the catamenia reappeared. The blood could not have been cleared of paraffin for over forty hours, the odour being still perceptible in the breath at the end of that time. The excretion by the kidneys caused a derangement, which lasted but a short time, and whose most curious feature was its delayed onset, the excretion of paraffin having practically ceased before the blood and albumen appeared. The abdominal pain and tenderness were more marked in this case than in any of the others I have seen recorded, persisting for two days and a half; their position and character suggested a gastric origin at first, and an intestinal one later on.

Edinburgh.

NOTES ON TWO CASES OF ATROPINE POISONING.[1]

BY S. MATTHEWS OWENS,

HON. OPHTHALMIC SURGEON TO THE IPSWICH, BRISBANE CHILDREN'S, TOOWOOMBA HOSPITALS, QUEENSLAND.

ON February 26th of this year a lad aged twelve, who though healthy was of slightly nervous temperament, was sent to me by Dr. Phillips of Warwick, as he was suffering from defective vision, and the use of the eyes for study caused headache. It was easily recognised that hypermetropic astigmatism was the cause of all his trouble, and, in order to estimate accurately his error of refraction and thoroughly paralyse his accommodation, I ordered two or three drops of two grains to the one-ounce solution of atropine to be instilled into the eyes three times within an hour on the Thursday morning, and again three times during that day, three times during Friday, and once on Saturday morning, on which day he was to visit me for correction. This would make ten instillations, spread over two days. When he was brought to my rooms on Saturday, he had all the symptoms of atropine poisoning, staggering and unsteady gait, dryness of throat and tongue, picking at imaginary objects in the air, talking, or rather muttering, incoherently; smiling, and occasionally laughing outright to himself. I was able to rouse him to attention for a few minutes, so that he would answer questions and do what I told him; but he soon relapsed. The face was slightly flushed, but there was no rash; pulse small and rapid. Pupils were only moderately dilated, and responded but slightly to light. The mother assured me that she had most carefully used the drops as directed, but as the lad had seemed strange the previous afternoon she stopped using them, so that they had only been put into the eyes eight times in all. I ordered him at once to be taken home and kept as quiet as possible. Milk diet and small doses of Dover's powder were the treatment, but throughout the day he continued to get worse, and in the evening tetanic spasms came on with delirium; in fact, he became so bad that, as I was absent from town, another medical man was called in. He at once recognised what had happened and quieted their fears, and in a few days the little patient got all right, but it was a week or two before he became well enough for me to correct his astigmatism.

The second case was that of a remarkably healthy old gentleman, named J. K——, aged seventy-three, who consulted me on March 5th preparatory to an operation for cataract. Being wishful to see if the cataract was mature up to the periphery, I instilled three times, in about twenty minutes, two or three drops each time of a 2-gr. to the ounce solution. The pupil dilated readily, and after finishing the examination I noticed that he spoke thickly, and did not answer questions readily. He got up to walk and fell back into the chair and soon became almost unconscious. Paralysis was so complete that he was quite helpless, and had to be carried to the cab, his face becoming suffused, and the body covered with an erythematous rash; pulse so rapid that I could scarcely count it. I ordered the same treatment, and in a few days he recovered, but had no tetanic spasms whatever.

Remarks.—These two cases are worth noticing, first, for the small quantity of the drug that in each case produced such severe effects; secondly, the different toxic symptoms produced; for in the old man's case paralysis came on rapidly and was complete, whereas in the younger patient the paralysis was less marked, the tetanic symptoms being most prominent, coming on eighteen hours after. The last instillation thus well

[1] Read before the Brisbane Medical Society, April 8th, 1890.

illustrates delayed tetanus of atropine poisoning. I will not occupy your time by discussing whether the paralysis of atropine is due to the action of the poison on the motor nerves or to its action on the cord, or whether delayed tetanus is due to paralysis of the motor nerves preventing the tetanic condition of the cord from displaying itself on the muscles. You will get it much better from the text-books than I can give it, and if I even attempted it I might get out of my depth and be drowned by some of my younger friends who are far better up in cerebro-spinal pathology than I ever was or will be. So I have merely given you the notes, and I think it will be agreed that they are two cases of some clinical interest.

Brisbane, Queensland.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

ON THE TREATMENT AND REMOVAL OF SPURS AND DEVIATIONS OF THE NASAL SEPTUM.

By T. SWIFT WALKER, M.D., F.R.C.S. ED.

THESE spurs on the nasal septum are a great terror to anxious mothers, and well may they be so, as all those who practise aural surgery know they repeatedly meet with adults who have disregarded them, but the result is occlusion of the Eustachian tube on that side, with loss of hearing. Now, I was surprised to find such an excellent aurist as Dr. Bronner making a statement that these spurs could not be removed with the galvano cautery. Regretting to differ from a gentleman whom I hold in great esteem, although personally unknown to me, in my practice I have notes lying before me of sixty-two cases where such growths have been removed, but I grant there is some difficulty unless the following precautions are adopted. Only last week Dr. Taylor of Burslem administered chloroform to a child of four years of age, whilst it was operated upon, as an anæsthetic is always necessary. In the first place, the opposite nostril is well plugged with alembroth wool, then the nostril where the growth is situated is dilated with Dr. Spencer Watson's speculum, an entomological needle is passed completely through the face of the spur so as to elevate it; one end of the needle is laid flat on the septum, and the other end supports the ala of the nose so that the speculum can be removed and the cautery applied until the whole of the growth is removed, and the needle lifted out. The after-treatment consists merely in inserting into the nostril a little plug of cotton-wool soaked in carbolic oil.

Hanley, Staffs.

CURIOUS CASE OF CONGENITAL DEFORMITY.

By WM. WALLACE, M.D.

THE following case of congenital deformity may be of interest to the readers of THE LANCET, as it has certainly been to me.

On May 5th, 1890, I was called to attend a multipara, Mrs. A——. The labour was an ordinary one, and nothing remarkable was noticed about the child until my next visit. My attention was then drawn to the left hand of the child, from which there hung a supernumerary little finger, with nail well formed on the end. There is nothing remarkable in there being an extra finger, but what I think is curious is the fact of part of this extra finger being reduced to a narrow piece of integument (without bone) connecting the base of the little finger with the end of the extra finger which contained bone, and was of similar size to the end of the normal little finger, and had, as above stated, a fully developed nail (*vide* engraving). On the right hand was a little protuberance at the base of the little finger corresponding exactly in position to the place of origin of the extra finger on the left hand. There is no doubt that whatever caused the arrest of growth in the narrow part of the extra finger of the left hand acted, as I may be allowed to say, more strongly on the right, and caused the amputation of what would have been a supernumerary finger of the right hand.

What has been the cause? Amputation of limbs in utero has resulted from the pressure of the umbilical cord. Has

the cord acted in the same way here, producing amputation in one hand and arrest of growth in the other? I am not aware of any other mode of producing these results; perhaps some of the readers of THE LANCET may be.

Rugby.

TREATMENT OF AN INTRA-UTERINE FIBROID TUMOUR BY GALVANISM.

By JOHN WELLER, M.R.C.S.E. &c.

TEN years ago a case of the above came under my treatment. The tumour was of the size of the fœtal head. My patient was a lady forty-seven years old. At the monthly period the bleeding was excessive, and the uterus was much enlarged. Under the direction of my kind friend and adviser, Sir Spencer Wells, iron, bromide of potassium, and tannic acid were tried. The injection of sclerotic acid was attended with the most satisfactory results. About the third day of the catamenia the aspect of the case resembled post-partum hæmorrhage. After six years of intense dread and suffering, the menopause was reached and passed, after one or two alarming floodings. All loss was stopped, but the weight of the growth was felt to be unbearable, and the uterus and fibroid dropped out of position. My patient could bear it no longer, and I once more consulted Sir Spencer Wells. Under his advice she went through a ten-weeks' course of galvanism. The machine used was a bichromate battery of Arnold & Son. To the positive pole the uterine sound was attached, and the sound passed through the os. The negative current was conveyed through a brass shield, which was placed over the uterus on the abdomen. The current passed was always easily bearable, and lasted from ten to twenty minutes daily. The daily decrease in the size of the growth was astonishing, the uterus regaining its position. At the end of the treatment the growth had practically gone, leaving only the uterus hard and the walls thickened. The patient could take long walks, and all pain and dragging were gone. She was very healthy, and everything was in favour of the dissolution of the growth with electricity. I feel certain that any of your readers who have such cases will feel an interest in mine.

Colchester.

OIL OF WINTERGREEN.

By JAMES D. STAPLE, M.R.C.S., L.S.A.

THIS oil consists of 10 per cent. of a peculiar volatile hydrocarbon called gaultheriden, and the remaining 90 per cent. of salicylate of menthol. I have used the oil of wintergreen as a local application in subacute and chronic cases of rheumatism for nearly four years, and am highly satisfied with the results. During my two years' house-surgeoncy at the Stockport Infirmary I used a liniment composed of equal parts of oil of wintergreen and olive oil in forty cases of subacute rheumatism. After this was applied the joint was wrapped in cotton-wool and lightly bandaged, and the patients stated that the pain generally ceased in from five to six hours after its application. It is in the more chronic

cases of rheumatism, however, that the oil of wintergreen is the most useful; and although I have used it in over one hundred of these cases, I have notes of only two patients who did not experience any relief from the liniment. I should add that in these chronic cases it is most essential that the liniment should be thoroughly rubbed into the affected parts. I first read of the oil of gaultheria as a local application in an American journal, and tried it in a few cases, which I reported, and I see in Martindale's and Westcott's extra Pharmacopœia for 1890 that my short note in the *British Medical Journal* on the oil of wintergreen as a local application is the only one mentioned under that heading.

Bristol.

UTERINE INERTIA FOLLOWING OVARIOTOMY.

By EDGAR DU CANE, B.A., L.S.A. LOND., &c.

I WAS called on July 27th to a labour which presented some interesting characters.

E. D——, aged thirty-two, after having had several (four) children, was discovered, when pregnant about five months, to be suffering from an ovarian tumour. This tumour, which proved to be cystic in nature, was removed by Mr. Thornton at the Samaritan Free Hospital, and she was subsequently delivered at full time. Nearly three years elapsed, and she became again pregnant; the labour progressed until full term, labour pains commenced, continued for a few hours, and then entirely ceased. Her medical attendant gave ergot without any effect, and then delivered her of a still-born child by means of forceps. A profuse post-partum hæmorrhage followed. Two years again passed, and another pregnancy ensued. When called to the case I elicited the above history, which I subsequently confirmed. The pains, which were of the ordinary character, continued for four hours, and then entirely ceased. I tried massage of the fundus, expression of the fœtus, and then, unwillingly, exhibition of ergot, all without effect. The os was fully dilated, but the head was very high up. I attempted the high operation with Galabin's long forceps, but as I experienced some difficulty I resolved to perform podalic version. I therefore turned by the internal method, and delivered her of a living female child. There was no trouble with the placenta, which I expressed after an interval of fifteen minutes, subsequently kneading the uterus to induce full contraction. She had no post-partum hæmorrhage, and made an uninterrupted recovery. The case seemed to me interesting with reference to Tyler Smith's "ovarian" theory of labour, as I thought the uterine inertia in such a marked degree following the removal of one ovary might be accounted for by that fact.

Camden-square, N.W.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Procemium.

UNIVERSITY COLLEGE HOSPITAL.

THREE CASES OF STRANGULATED HERNIA IN WHICH THE SYMPTOMS PERSISTED AFTER REDUCTION; REMARKS.

(Under the care of Mr. MARCUS BECK, Mr. BARKER, and Mr. POLLARD.)

THE series of three cases of hernia which we publish below is of much interest; in one of the patients the symptoms of strangulation continued after apparent reduction by taxis, and in the others similar symptoms continued after complete reduction in consequence of paralysis of the portion of intestine which had apparently been involved in the hernia. Amongst other causes for the persistence of symptoms of strangulation after apparent reduction of a hernia by taxis may be mentioned: (1) Complete reduction *en masse* or *en bloc*; (2) reduction *en bissac*, the bowel being reduced from the original sac and forced into a diverticulum; (3) the hernial contents may be forced between the peritoneum and the abdominal wall, the neck of the sac being ruptured but still constricting the bowel, and displaced upwards away from the body of the sac; (4) the hernia may be forced into the subserous connective tissue through a rent in the neck of the sac. Causes other than paralysis of the intestine for the continuance of symptoms of strangulation after complete reduction are the return to the abdomen of gut which is still strangulated by adhesions which were constricting it within the sac before reduction, and the onset of some form of peritonitis. For the notes of these cases we are indebted to Mr. Raymond Johnson, surgical registrar.

CASE 1.—T. R——, male, aged sixty-eight, had worn a truss for a left scrotal hernia since the age of twenty-four years. On January 17th, 1889, the hernia came down and could not be reduced. In the evening he came to the hospital. Taxis failed until chloroform was given, when reduction was effected. The inguinal canal appeared to be quite clear, and a pad was placed over the internal abdominal ring. Two ten-minim doses of tincture of opium were given during the night. On the following day (Jan. 18th) the patient complained that the rupture felt "as though it had not all gone back." The inguinal canal appeared to be empty; it was, however, noticed that the left testicle lay higher in the scrotum than natural. In the evening of Jan. 19th vomiting set in, the vomited fluid was odourless and light brown in colour, the vomiting was frequently repeated during the night and during the 20th until midnight, when it ceased for twenty-four hours. During the night of the 21st and the 22nd the patient vomited occasionally; flatus continued to be passed; there was no elevation of temperature; general condition good. The treatment consisted of strict spoon diet and small doses of morphia hypodermically. On Jan. 23rd a small motion was brought away by an enema. On Jan. 24th the tongue was dry and the vomiting continued. At 8 P.M. chloroform was administered and Mr. Barker made an incision three inches in length over the external abdominal ring. A sac was exposed and opened. In its lower end was the testicle, whilst above a finger could be passed freely along the inguinal canal to its upper end, where it entered a sac containing a small coil of congested but still polished intestine. The neck of the sac was notched with a hernia knife and the gut reduced. The sac was then drawn down and ligatured at its neck with silk; the lower part of the sac containing the testicle was left in the scrotum. On account of the patient's condition, it was not thought advisable to prolong the operation by closing the ring. The incision was sutured with silk and dressed with salicylic wool. The vomiting ceased after the operation, and the patient's condition rapidly improved. The bowels acted after a glycerine enema on the seventh day. The wound healed by first intention. The patient left the hospital, wearing a light truss, on the nineteenth day after the operation.

CASE 2.—C. A——, male, aged forty, had been ruptured on the left side for fourteen years, and had worn a truss for twelve years. On Jan. 30th, 1889, the rupture came down, and was reduced with much pain after three hours' taxis by the patient himself. Shortly afterwards he was said to have passed a large quantity of blood from the rectum, and vomited a yellowish fluid containing clots of milk. The vomiting continued, and at 10.30 P.M. he was admitted to University College Hospital. The hernia appeared to have been completely reduced, and the empty sac could be felt in the scrotum. Before midnight the patient vomited five times and became very exhausted; the vomited matter was deeply bile-stained. Fifteen drops of tincture of opium were given every four hours, and ice to suck. On the following morning (the 31st) the tongue was dry; temperature normal; abdomen not distended; the vomit resembled in appearance a typhoid stool, and had a distinctly fæcal odour; no flatus had been passed since admission. At noon Mr. Pollard decided to operate. During the administration of the chloroform the hernia came down, but was easily returned. An incision was made over the external abdominal ring and the empty hernial sac opened; a finger could be passed from it freely into the abdomen. The incision was then prolonged upwards, dividing the layers of the abdominal wall above the inguinal canal. The small intestine which presented was drawn out and for a length of nearly two feet was swollen, congested, and in parts lustreless. The lower limit of the congested portion was sharply defined and marked by a distinct constriction. The intestine was returned, and the crural, obturator, and umbilical regions investigated with the finger, but nothing abnormal detected. The incision

was closed with silk sutures, the upper ones including the whole thickness of the abdominal wall. On account of the patient's collapsed condition no attempt was made to effect a radical cure. The wound was drained and dressed with alembroth gauze. At 2 P.M., 4 P.M., and 9 P.M., the vomiting was repeated. On the following day the vomit was bilious and odourless; the vomiting entirely ceased after 9 A.M. on Feb. 2nd, forty-five hours after the operation. Flatus was passed for the first time on the same day. No food was given by the mouth until Feb. 3rd. The bowels acted after a glycerine enema on the 10th. The wound healed by first intention. On Feb. 14th the hernia came down, but was easily reduced. The patient left the hospital, wearing a truss, three weeks after the operation.

CASE 3.—H. B——, male, aged twenty-six, had been ruptured and worn a truss for two years. On June 29th, 1890, whilst bathing, the hernia came down and could not be reduced. During the night bilious vomiting occurred, and the patient suffered considerable pain. On the following morning (the 30th) he was admitted to University College Hospital. There was a large scrotal hernia on the left side, presenting all the signs of strangulation. The hernia was reduced with some difficulty under ether; a distinct gurgle was felt. During the day and night the vomiting continued, and there was considerable abdominal pain, chiefly in the umbilical region. Nothing abnormal could be detected in the inguinal region. At 3 P.M. on July 1st Mr. Beck made an incision over the external abdominal ring, and the thickened sac of a congenital hernia was opened. It contained only some blood-stained fluid in which small flakes of lymph were floating. A considerable quantity of a similar fluid drained from the peritoneal cavity. A finger passed from the sac into the abdomen without hindrance. A piece of thickened omentum loosely adherent to the neck of the sac was drawn down and subsequently ligatured and excised. A coil of intestine was then drawn down with the finger; a length of at least twelve inches was bright red in colour, much swollen, and in places roughened on its surface. It was returned into the abdomen. The neck of the sac was ligatured with kangaroo tendon, and three sutures were placed in the pillars of the abdominal ring. The wound was sutured with silk and horsehair, and dressed with alembroth gauze. The vomiting completely ceased after the patient had recovered from the anæsthetic. Strict spoon diet was given for nine days. The bowels were opened by an enema on the 10th. There was slight elevation of temperature for five days, the maximum being 100·6°. Primary union occurred in the wound. The patient left the hospital on July 19th.

Remarks by Mr. JOHNSON.—The first of the above cases must be looked upon as one of partial reduction *en masse*, the upper part of the sac of a congenital hernia having been forced into the loose subserous tissue at the inner end of the inguinal canal. It is evident that in this way an explanation was afforded of the unusual position of the testicle after reduction. In the second and third cases, however, the persistence of the symptoms was caused by paralysis of a considerable segment of the bowel resulting from the strangulation. In each of these cases the intestine presented at the time of the operation the signs of inflammation, which, supposing the strangulation to have been complete, would only manifest itself after the restoration of the circulation by the reduction of the hernia. Cases of strangulated hernia in which the symptoms persist after reduction often present great difficulty in diagnosis, and therefore difficulty in deciding upon the advisability or not of operative interference. Should there be any unusual condition in the situation from which the rupture has been reduced the line of treatment is plain—viz., to lay open and thoroughly examine the hernial sac. All the possible positions of a second hernia should also be carefully investigated. In the last two cases, however, although there were no evidences that the hernia was imperfectly reduced, the same treatment was adopted. This was done with the belief that only by actually opening the sac can it be positively determined that the rupture is completely reduced, and that no such condition as reduction *en masse* is present. In one of these cases by prolonging the incision upwards, a very complete examination of the abdominal cavity was made, and the presence of any still-existing strangulation excluded. Such treatment involves but little risk, and although in two of these three cases operation was in reality unnecessary, yet in other cases with similar symptoms, such as in Case 1 of this series, it may prove the only possible means of saving the life of the patient.

HUDDERSFIELD INFIRMARY.

A CASE OF BRONCHOCELE COMPRESSING THE TRACHEA; TRACHEOTOMY; RECOVERY; REMARKS.

(Under the care of Dr. CLARKE.)

IN the majority of the cases in which dyspnœa is found dependent on disease of the thyroid, the symptom is caused by direct pressure on the trachea, and that structure shows alteration in shape. This case is an example, not uncommon, of dyspnœa of an urgent character due to pressure by a small deeply-seated enlargement of that gland, also of the possibility of overlooking such enlargement in the early stages, and of ascribing the symptoms to other causes. We drew attention to these points when we published the case under the care of Dr. Curgenven[1] which is referred to in the remarks, and it is always a cause for congratulation if the necessity for operative relief arises under the favourable circumstances found here, and life is saved by prompt treatment. For the notes of this case we are indebted to Mr. Frost, junior house surgeon.

Fred. M——, aged ten, is the third child of a family of seven. His father and mother are living and well. There is no goitre in the family. In February, 1889, he began to suffer from a croupy cough and heavy breathing; the cough did not keep him from play or school, and never woke him up at night. In September, 1889, he became worse, and a doctor was called in to attend him for the "croup." The doctor said that the croup was caused by the swelling of the neck, which had been noticed for some time. Since September the lump had got much bigger. During the night of Nov. 18th he was restless, his noisy breathing kept everyone awake, and in the early morning he had such an attack of dyspnœa that his parents thought he was dying; the medical attendant was fetched, and he recommended the child to be brought to the infirmary.

It was noted on admission to the infirmary on Nov. 19th: He is a healthy-looking boy, with good pulse and colour; his breathing is stridulous; he has a swelling in the position of the thyroid, which is firm, does not fluctuate, and moves with deglutition. He can say "Ah!" clearly and in a loud voice. A laryngoscopic examination was attempted about 7 P.M.; it upset him, so it was postponed. Some days later the cords were clearly seen; they were healthy-looking and moved equally. The examination was afterwards repeated on different days. Mr. Frost was called to him about 11.30 P.M. (in the absence of the senior house surgeon) and told he was dying. He found the boy on his hands, kneeling on the bed, turning slowly about, and looking terrified. His efforts to breathe were very ineffectual, and resulted in a short, whistling sound. Mr. Frost carried him into the operating-room, and decided to perform tracheotomy. By the time the instruments were ready, he seemed almost moribund. No anæsthetic was used, and the first cut made him resist, but he soon became quite unconscious, and altogether stopped breathing, so that he seemed to be dead. The incision, which was over the prominence of the thyroid in the middle line, was then enlarged downwards, and when the thyroid was reached an unsuccessful attempt was made to displace it. It was then incised to a depth of perhaps half an inch; only two or three vessels spurted. By retracting and sponging, the trachea was found in the middle line; it was opened and a tube inserted. After one or two artificial respirations he began to breathe again. He was given ether injections, a brandy enema, and flannels wrung out of hot water were kept over the tube.

Nov. 24th.—Tube removed, and the patient encouraged to breathe through the mouth.

25th.—Râles at both bases. No dulness. Breath noticed to be fetid. The swelling of the thyroid is smaller.

26th.—The wound has been healing up rapidly; he does not yet breathe entirely through his mouth, and has dyspnœa occasionally. It is scarcely noticeable during the day, but is worse at night, when his sleep is interrupted every few minutes by coughing and stridor. A drachm of tincture of hyoscyamus was given at night, repeated after two hours.

29th.—Sleep was impossible, so a small indiarubber tube was inserted. He slept well with it.

Dec. 1st.—Dr. Clarke removed the tube, and wished it to be kept out if possible. He ordered the patient seven grains of ammonio-citrate of iron, fifteen grains of bromide of

[1] THE LANCET, vol. i. 1890, p. 598.

potassium, in an ounce of water every four hours, and thirty grains of bromide of potassium every night as a draught.

6th.—The tube has not been replaced; he sleeps very well. The draught of bromide of potassium was discontinued. The swelling of the thyroid is scarcely perceptible. Circumference of neck is 11 inches. Unfortunately the measurement was not taken on admission.

Dec. 27th.—The thyroid swelling has gone. He was sent home (nine miles away) well.

June 7th, 1890.—He came with his father to show himself. He has grown, and looks very well. Circumference of neck is still 11 in. No swelling of thyroid.

Remarks by Mr. FROST.—This boy's "croup," as it was called, was noticed before the bronchocele, probably because a little stridor could not be as easily overlooked as a small bronchocele. In Sept. 1889 the bronchocele was larger, and the dyspnœa was more constant, and after the operation they both disappeared. This seems sufficient to show that the bronchocele was the cause of the dyspnœa. Dr. Bristowe says: "Compression of the trachea involves stridor and dyspnœa, which is often paroxysmal, and is liable to end in sudden death." On the day of admission the stridor was tracheal, because he had not aphonia with it. I have looked up one or two authorities, and find that in operations involving incision of the enlarged thyroid or isthmus they lay emphasis on precautions to prevent hæmorrhage. I think they might add, which they do not, that the division of an enlarged isthmus may be attended by quite controllable hæmorrhage. A remarkably similar case is recorded in THE LANCET of March 15th last, of a boy with goitre requiring tracheotomy. To reach the trachea and avoid the thyroid the operator carried his incision downwards, so that at the bottom of it the aorta could be felt pulsating. A tube was passed into the trachea, but the boy did not recover. Now with a moderately large goitre, if tracheotomy should be urgent, the risks of one or the other of these methods must be encountered. Most likely, too, they must be encountered in haste and without assistance; yet in the one case, if the thyroid should be cut into or gripped with Spencer Wells' forceps more than is necessary, it may help to cure the goitre itself, whereas in the neighbourhood of, say, the left innominate vein, the knowledge that a slip is inexcusable would prevent one from running the risk.

ROYAL INFIRMARY, HULL.

A CASE OF CHOLECYSTOTOMY FOR SUPPURATION IN THE GALL-BLADDER AND GALL-STONES; RECOVERY.

(Under the care of Mr. CRAVEN.)

THIS case (for the notes of which we are indebted to Mr. Frank Savery, house surgeon) is a contribution to the list (an increasing one) of successful operations for the relief of distension of the gall-bladder, dependent upon blocking of the cystic duct by means of calculi. The symptoms were spread over a long period of time, and the patient was apparently almost worn out with the pain. The operation—that usually performed for the removal of gall-stones—disclosed the presence of suppuration in the gall cyst, a condition of which there were no signs before, and which is said to be uncommon in cases of multiple gall-stones. Dr. Depage,[1] who has made an analysis of seventy-eight cases of cholecystotomy, gives the following as the causes of a fatal ending in the unsuccessful cases: Hæmorrhage and collapse 5, acute peritonitis 3, biliary retention 2, effusion of bile into the peritoneum 2, secondary causes 4, undetermined causes 2.

Alice M——, aged forty-three, was admitted as an in-patient on Feb. 4th, 1890, under the care of Dr. E. O. Daly. The patient was a married woman, and had had fourteen children, the youngest being born in August, 1887. She was well nourished, had never had any serious illness, and enjoyed good health until November, 1887; then she had an attack of pain in the epigastric region accompanied by nausea and vomiting. The pain was gnawing in character, sometimes sharp, and was situated to the right of the middle line, passing backwards to the right lumbar region. This attack lasted about two days, and after it she felt in her usual health. Since that attack she had had several similar in character every month or two, each one lasting two or three days. Between the attacks she was quite free from pain. In June, 1889, she fell heavily on her back, and a few days afterwards noticed a lump in her right side. In July, 1889, she had a very severe attack of pain in the epigastrium and sickness, and since this attack she had not been free from pain; it was gnawing in character, getting much worse at times. The patient had been accustomed to work hard. She had never had a good appetite; she took beer with her dinner and supper, occasionally spirits. She often felt sick in the morning. The bowels had always been constipated, and she had taken opening medicine for years. She had not been losing flesh during her illness, and never had jaundice.

On Feb. 4th, 1890, the patient complained of pain in the epigastric region; it was gnawing in character. She did not suffer from nausea, vomiting, or jaundice; the bowels were constipated. The abdomen was not distended. A lump could be felt under the margin of the right ribs in the position of the gall-bladder. It was tender on pressure, and was freely movable; it was not easily felt, owing to its mobility. The edge of the liver could be easily felt, and the tumour appeared to be continuous with it. The heart and lungs were normal. The urine was acid, sp. gr. 1012; no albumen; no deposit; no urinary symptoms. The temperature was normal in the morning; in the evening it was generally about 100°. Half a drachm of sulphate of magnesia, to be taken three times, was ordered. The tumour seemed to vary in size, sometimes being easily felt, at others with difficulty; its position also varied, being sometimes much lower down and further back than at others. The state of the patient did not vary much before the operation; she suffered continuous and considerable pain—in fact, she said her life was not worth living, and begging to have something done. Dr. Daly diagnosed the case as one of probable distension of the gall-bladder, and recommended an exploratory operation, the case being transferred to Mr. Craven.

Operation.—On April 15th, 1890, at 9.30 A.M., Mr. Craven operated, being assisted by Mr. Evans. A vertical incision was made three inches to the right of the middle line, commencing at a point one inch below the margin of the ribs and extending downwards for four inches. The abdominal cavity was opened, the liver coming into view. On passing the fingers into the abdominal cavity, the gall-bladder was found somewhat distended, and a stone could be felt near the neck. The gall-bladder was aspirated and two ounces of pus removed; sponges were then packed around the gall-bladder and a vertical incision three-quarters of an inch long made in the upper and anterior surface of the gall-bladder; thirty-seven stones were then removed, varying much in size, some being very small. The edges of the gall-bladder were then stitched to the abdominal incision with silk sutures, the sutures passing through the whole thickness of both. The abdominal wound above and below was closed and a drainage-tube put in the gall-bladder. The wound was then dressed. The patient rallied well from the operation and was a little sick. In the evening the wound was dressed again, a large quantity of bile being discharged.

April 16th.—Temperature 100°; pulse small (108). No sickness. The wound dressed; the discharge had come through the dressings.

17th.—Discharge much less. Temperature last night 100·4°; this morning 99°.

19th.—Temperature 98·4°. The wound has been dressed daily.

22nd.—The stitches were removed. The bowels acted for the first time since the operation, and the motion was normal in character.

31st.—Drainage-tube left out. Temperature quite normal. The patient has had hardly any pain since the operation.

May 10th.—Wound very small; about two ounces of bile passes into dressings daily.

July 1st.—Patient is in good health, with no pain over the gall-bladder. The wound is not quite healed, a small biliary fistula being left.

[1] Journal de Méd., de Chir., et de Pharm., Bruxelles, No. 24, 1889.

THE BRITISH ASSOCIATION. — This Association commenced its sittings on Wednesday at Leeds. Professor Milnes Marshall delivers the Presidential Address in Section D (Biology).

Reviews and Notices of Books.

The Annals of the Barber-Surgeons of London, compiled from their Records and other Sources. By SIDNEY YOUNG, one of the Court of Assistants of the Worshipful Company of Barbers of London. With Illustrations by AUSTIN T. YOUNG. London: Blades, East, and Blades. 1890.

IN this sumptuous quarto, put forth with an elegance and solidity that do infinite credit to the publishers, Mr. Sidney Young has laid the profession under lasting obligation.

English literature, it has often been remarked, is poor in histories of medicine. It has no work of equivalent merit on that subject to Haeser's "Lehrbuch der Geschichte der Medicin und der epidemischen Krankheiten," or to Daremberg's "Histoire des Sciences Médicales," or to Puccinotti's "Storia della Medicina." But it is not without carefully compiled monographs on special departments of the history of the healing art as evolved in the British islands—such departments, particularly, as the origin and vicissitudes of medical schools and corporations, or the rise, progress, decline, and fall of pathological theory or therapeutic practice. Even in this restricted field, however, the profession in England seems nowadays too busy to have time to work; it is too sedulously engaged in making history to have the leisure required for writing it. If such be the fact—and it is the most acceptable explanation of a literary barrenness not shared by the profession in other European countries,—we must be all the more thankful to such laymen as Mr. Sidney Young for so ably filling up that long-standing *lacuna* in the annals of British medicine—an account of the barber-surgeons.

He takes us back wellnigh to the dawn of authentic English history. Before the twelfth century the monks were the chief custodians of the bodily health, as the superior clergy were of the spiritual, and the former fraternity employed the barbers to assist them in the minor operations of surgery. An event occurred, however, which enabled the barbers to set up as practitioners on their own account. Bleeding, tooth-drawing, cauterising, and the preparation of medicated baths had been their auxiliary work till 1163, when "the Council of Tours, under Pope Alexander III., considering that a practice which involved in its operations the shedding of blood was incompatible with the holy office of the clergy, forbade them to interfere in any matter of surgery." To the functions thus voluntarily renounced by the Church the barbers succeeded, and they formally assumed the title of barber-surgeons, as practitioners of both "barbery" and "surgery." Mr. Sidney Young bids us remember, however, that while surgery ceased to be a *métier* of the Church, medicine as a healing art remained in her hands.

From the archives of the Guildhall he unearths an ordinance, dated as far back as 1307, enacting, "que nul barbier ne soit se ose ne si hardy qil mette sank en leur fenestres en apiert ou en view des gentz, mais pryvement le facent porter a Thamise sur peine des doux souldz rendre al oeps des Viscountz" (that no barbers shall be so bold or hardy as to put blood in their windows, openly or in view of the people, but let them have it carried privily unto the Thames, under pain of paying two shillings to the use of the sheriffs). This document is proof positive that they had been engaged in surgery long enough—even at that date—to develop abuses (advertising their profession, to wit, in such a way as to constitute a public nuisance) and to incur the prohibitive interference, under pains and penalties, of the civic authority. In the following year (1308) we have, according to Mr. Sidney Young, "the first express entry concerning our Company"—the presentation or admission of Richard le Barber as Supervisor or Master of the Barbers before the Court of Aldermen. Richard's supervision extended to details not very creditable to the craft, for it appears that one part of his duty was to check the keeping of *lupanaria* (bagnios), a practice which in the reign of Edward II., and, indeed, long after as well as before it, was greatly in vogue among the barbers. The office of Master would seem to have been held for a succession of years; at any rate, Mr. Sidney Young's industry has failed to discover in the City books any record of another admission to the office until 1376, after which "two Masters were appointed, and then, for some years subsequently, two new Masters were sworn in annually."

Coeval with the Barbers' Company there was another in the City of London, that of the surgeons—"in no way connected with the Barbers', but, like them, existing by prescription only and unincorporated." That these two Companies, in "the days of so much trade protection and jealousy," should be on very amicable terms was, as Mr. Sidney Young puts it, "not to be expected," as, indeed, is apparent even from the scanty records of the period. The Surgeons' Guild, he points out, can at no time "have been a numerous body," their members on many occasions being hardly a dozen, and never by any possibility exceeding twenty. It was, however, the "more aristocratic," and its fees were naturally higher—facts which explain the greater popularity of the barbers, who, moreover, as shavers and hair-cutters, were brought more frequently into contact with the general public, and had thus peculiar facilities for extending their surgical "connexion."

At first, and for a long term of years, the barbers made a very good fight with the Surgeons' Guild, and held their own effectively. While the surgeons were without a livery the barbers possessed one—were, indeed, of ancient standing in the City,—and so had influence enough to acquire the same footing as the better class of guilds by procuring a Charter of Incorporation. This they obtained from the young King Edward IV. in 1462, the first year of his reign. Of the Charter itself, which Mr. Sidney Young gives in its original Latin, there are many interesting clauses setting forth the privileges enjoyed by the corporation, one of which was "a source of continual strife and conflict with the civic authorities, for by it *all* our freemen claimed to be exempted from serving on juries"—an immunity which, claimed as recently as 1868 and submitted to Sir J. D. Coleridge (now Lord Chief Justice), was actually sustained as valid in law. Since then, says Mr. Sidney Young, "the Jury Act has swept away this cherished immunity, and thus let the barbers down to the level of their fellow-citizens."

Over his fascinating pages we can only proceed in swallow fashion—skimming and dipping—till we come to what he justly calls the "Company's chief treasure," the picture by Holbein, "as glowing as a Titian and as minutely faithful as a Gerard Dow," in which King Henry VIII. is represented in the act of handing to the company the document setting forth the Union of the Barbers with the Guild of Surgeons, accomplished by Act of Parliament in 1540. The picture, as many of our readers will remember, was one of the most conspicuous among the treasures in the lately closed Tudor Exhibition, and Mr. Sidney Young's analysis of its details from the masterly "full-length" of Bluff Hal himself, to the kneeling figures of the fifteen members of the Court on His Majesty's left, and the three "grave and closely shaved personages" on his right, is executed with taste and skill, and forms one of the happiest sections of his

book. We wish we could say as much for his translation of the Latin inscription, with the twelve hexameters and pentameters which follow it. He has rendered these rather loosely, and in at least one distich has quite missed the meaning. Alluding to the "more than sad" (*tristior*) pestilence which had ravaged the English world, the poet (or rather versifier, who was certainly no George Buchanan) proceeds—

Hanc Deus insignem cladem miseratus ab alto
Te medici munus jussit obire boni.
Lumen evangelii fulvis circumvolat alis:
Pharmacon adfectis mentibus illud erit:
Consilioque tuo celebrant monumenta Galeni
Et celeri morbus pellitur omnis ope.

which means: "God, pitifully beholding from on high this notable scourge, commanded thee to undertake the part of the good physician. The light of the glad tidings hovers around on golden wings: a healing charm will this be to the minds of afflicted men: and, by thy sage counsel, they eagerly consult the recorded words of Galen (that is, the medical authors), and with the prompt help of these the malady is wholly put to flight."

In Mr. Sidney Young's version "insignem cladem miseratus" becomes "pitying this remarkable scourge," and "consilioque tuo celebrant monumenta Galeni" is rendered "the disciples of Galen meet to raise a monument to thee."

He is on securer ground when narrating the lives of the distinguished professional men who figure in the picture, and his admirable little sketch of Dr. William Butts, "one of the King's physicians, ever famous for his memorable interference with His Majesty on behalf of Archbishop Cranmer in 1544, when the Romish party in the Council endeavoured to procure that prelate's committal to the Tower," will be read with interest by all lovers of medical biography. History and the drama, as well as fine art and general literature, have much to draw from his pages, furnishing as they do conspicuous evidence of how the medical profession, even in its lower and irregular grades, interweaves itself with "the story of our lives from year to year." Even questions and controversies of the day find illustration or instructive "precedents" in his work; as, for instance, the discussion recently started by Dr. Willoughby Wade and Professor Huxley as to whether the profession should not exclude Latin from the mental equipment of its students and members. On July 22nd, 1556, it is ordained in the minute-book of the Barber-surgeons that, "from the feaste of Saint Michaell th' Archanngell next comynge, no barbor surgeon that dothe occupye the mystery of surgery shall take or have any prentys but that he can skyll of the Laten tonge and understand the same." But next year—Aug. 27th, 1557—this ordinance was rescinded, and a member of the company was allowed to "take unto his apprentice any person althoweth (although) he be not learned in the Latin tonge." Years passed away, and the barber-surgeons came back to their former mind, ordaining on March 7th, 1527, that "for ye future, when any apprentices are to be bound to surgeons, they shall be called in and be examined by themselves touching their skil in ye Latin tonge."

The annals of the Company do not decline in interest as we advance to its reception of "the most high and mightie Prince James" on his entry into London; or to its building, in 1638, an "anatomy theatre" (Inigo Jones being the architect), or to 1647, when, sharing the austerity of the Puritan *régime*, it cut the "ondecently long hair" of a "sawcy" apprentice, and laid out three shillings "ffor mending the corrector twice." Later still, the glimpses we get of Samuel Pepys are eminently characteristic and entertaining, particularly when "Mr. Pepis" came to a lecture in the anatomy theatre, and was "used with extraordinary great respect" afterwards, when he "had a fine dinner and good learned company, many Doctors of Phisique."

But we must draw rein. We have to congratulate Mr. Sidney Young on his diligence and success in the compilation of a deeply interesting work, and Mr. Austin T. Young on the fidelity and skill of its numerous illustrations. We trust their "boke" will one day be made accessible in a cheaper form to the non-professional public.

Les Bactéries. Par MM. CORNIL et BABES. Troisième Édition. Paris: Félix Alcan. 1890.

THIS admirable work, which now appears in two large handsomely printed volumes, has been most thoroughly revised by the authors, the vast and rapid extension of bacteriological research rendering this a task of no little magnitude. For in the four years that have elapsed since the second edition was published many new discoveries have been made and many corrections of former views have been needed. Several subjects are introduced for the first time into the text, these mainly dealing with the bacterial diseases of animals, such as pneumo-enteritis of swine, contagious mammitis of cows and sheep, hæmoglobinuria of cattle, and pneumonia of the horse. Tetanus, too, which recent research has shown to be probably one of this class of disease, receives ample consideration. A new chapter is added on Actinomycosis, which has been so prominently before the profession of late. Nor is the bacteriology of influenza omitted, as well as that of some catarrhal inflammations of the respiratory tract. A complete account, also, is given of M. Pasteur's anti-rabic inoculations. The book is entitled to a foremost place in the literature of bacteriology. Its greatest value will perhaps be found in its use as a work of reference; but it is written in so clear and attractive a style that it may well be studied by those who have no practical acquaintance with the methods employed in these researches. These methods are amply described in the opening chapters, which comprise also a full description of the schizomycetes. Here, too, are discussed such topics as phagocytosis, attenuation, the action of bacteria on the tissues, ptomaines, and experimentation on animals. The main portion of the work treats in turn of all the infective diseases associated with the development of bacterial organisms. Commencing with the affections of animals, it deals next with the acute diseases of man, and lastly with chronic bacterial diseases. It is not necessary to particularise the subjects, which are treated in an exhaustive fashion. The descriptive matter is illustrated with many tinted figures in the text and several plates.

DEATH UNDER CHLOROFORM.—An inquest was held at Bayston-hill, Shrewsbury, on Saturday, on the body of William Longford, who died under chloroform. The deceased had a tumour in his throat, and Dr. Charnley and Dr. Lytle, both of that town, decided, with his consent, to remove it. Chloroform was administered, but before the operation was commenced, death ensued from the combined effects of the anæsthetic and the obstruction to the air passages caused by the tumour. A verdict in accordance with the medical evidence was returned.

THE METROPOLITAN ASYLUMS BOARD.—On Saturday, at an ordinary meeting of the members, a letter was submitted to the Board from the Local Government Board generally sanctioning the plans for the extension and improvement of the staff, and for providing other accommodation at the Western Hospital; but some exception was taken to the practice hitherto adopted by the managers of closing hospitals when other hospitals were not full, and it was recommended that the hospitals should remain open, and kept efficiently provided, even in the absence of any pressure of cases.

THE LANCET.

LONDON: SATURDAY, AUGUST 30, 1890.

THE cholera intelligence which we recently published has involved certain interesting considerations relating to the sanitary administration which has for its aim the prevention and control of that disease. The measures adopted in Spain and Portugal and at the various ports in the basin of the Mediterranean present one prominent feature which contradistinguishes them essentially from those adopted in this country. This has practically consisted in waiting until cholera is known to prevail, and in then making desperate efforts to keep it out by sanitary cordons and quarantine restrictions. How futile most of the land measures of restriction have been is well known from the experience of Spain and from the fact that the central Government has ordered their discontinuance; and we have yet to learn how far the so-called medical observation and disinfecting processes adopted by the French and the Portuguese Governments on their Spanish frontiers have succeeded in detecting a single case of cholera. The French system seems to be based on sound principles in so far as detention of passengers is concerned, but rumour is different as to so-called disinfecting measures. But the most serious effect of trusting to processes such as Portugal and other nations have organised lies in the neglect of true sanitary measures which they induce. In 1884 the processes referred to were adopted in and about Toulon and Marseilles; they were admittedly failures, and it was decided that the two cities and their ports must be so dealt with as to secure the removal of the conditions favourable to cholera diffusion. But we have learned from Dr. ROCHARD'S account published this year, that nothing worthy of the name has been done; and we again find quarantine imposed on vessels coming from the East as the principal, if not the sole, measure of prevention adopted at the southern ports of France.

At home we have had a rumour of imported cholera, which happily turned out to have no substantial foundation. But the case was dealt with as if it had been true Asiatic cholera; and our English system was well illustrated by the measures adopted. The vessel had come from a country and a port where cholera is practically endemic, but it was subjected to no restrictions on reaching the Thames. When, however, the so-called choleraic symptoms declared themselves, the Port Sanitary Authority of London, with its excellently trained staff of officials, did all that was necessary in so far as the vessel and the port were concerned, and they also communicated with the sanitary authorities of the districts which the man had visited since leaving his ship, in order to facilitate inquiry as to any subsequent attacks that might occur, and to further the adoption of any measures of cleansing and disinfection which might be deemed necessary. Our notification system also facilitated immediate dealing with the patient, and it would also have led to the prompt discovery of any subsequent cases, had such cases occurred. In short, the man having once left his vessel, the port authorities performed their duties as to the ship, and the responsibility of maintaining such sanitary circumstances and such sanitary administration on shore as go to prevent cholera extension devolved on the land authorities. And we have no hesitation in saying that since our sanitary authorities have understood that futile quarantine restrictions will not, and indeed cannot, be adopted under the conditions of our ports, they have done as much as, if not more than, any other nation to remove from their midst the conditions under which cholera is known to extend. If any others have done as much, they are certain English-speaking nations of other continents. We do not say this in any boasting spirit, for we know but too well that in some of our old cities and towns, and even in some of our modern towns and villages, much still needs to be done; but we are confident that if we are ultimately to acquire complete safety against cholera, the action to be taken must be on the same lines as heretofore, and the responsibility of local authorities towards the communities whose health they have charge of must continue to be emphasised and enforced.

Another administrative point has again come to the fore in connexion with the view that the Red Sea is likely to be the principal channel by which cholera may make its way from the East into Europe. This view has naturally been held ever since the formation of the Suez Canal afforded a new and an easy means of human intercourse between the East and the West; but it must not be forgotten that the old route by means of Persia or Mesopotamia and Southern Russia is still a channel by which cholera may approach through the Russian provinces bordering on the Black and the Caspian Seas. But the importance attaching to the Red Sea route was sufficient to have led to proposals at the International Sanitary Conference of Rome in 1885 for controlling shipping coming from the East, before it should enter into the Canal and so pass into the Mediterranean. The restrictions which a majority of the Technical Commission of the Conference then advocated savoured essentially of the antiquated quarantine measures which England has long since determined to abandon as useless and vexatious, and hence the delegates from this country opposed the scheme proposed by, and so strongly supported by, if indeed it did not emanate from, the French delegates. It was the conflict of opinion which arose on this point of stringent quarantine restrictions that led to an abandonment of the Conference, which, having adjourned, never reassembled. A fresh initiative step has, however, now been taken; and it is stated that the Italian Government have addressed their representatives abroad, with a view to the institution of an International Sanitary Service to prevent the importation of epidemic disease from Asia into Europe. It is proposed that a permanent Technical International Commission should be charged with the sanitary service of the Red Sea; that two international sanitary bureaux should be charged with the medical inspection of vessels entering the Red Sea, one in the neighbourhood of Suez, and the other at the Straits of Bab-el-Mandeb; and, thirdly, that at or near both these localities international sanitary stations

should be established at which all "desirable quarantine measures" and proper disinfection could be carried out.

Whilst we have but slight confidence in the operation of international commissions on which all nations who regard themselves as interested claim to be represented, we feel that the most important point of this proposal lies in the question as to the character of the measures which it will be held desirable to adopt as regards shipping passing through the Red Sea. The British contention has for many years past been that whilst our Government is content to allow Mediterranean Powers to impose what restrictions they like as regards vessels sailing for their own ports, they have no right to interfere with the progress of British vessels which are passing straight to British ports without touching anywhere in Egypt or at any other port in Europe; and that for such vessels the Suez Canal ought to be regarded as an arm of the sea. This contention was rejected at Rome, and the rejection led to the collapse of the conference. The true cause of the collapse was recognised by the Italian Government, who shortly afterwards issued from their Foreign Office a document declaring that acceptance of the British proposition appeared to them to be desirable both as a matter of expediency and in order to meet the necessities of the case. But they coupled this declaration with a reservation as to the desirability of medical inspection at some point in the Red Sea. If such medical inspection as is now proposed be for the purposes of supplying information to European countries as to the health of passing vessels, it can hardly be objected to. But England is not likely to assent to the detention of her troop-ships, postal services, and merchantmen after all the enormous expense she has incurred in seeking to remove from her ports, cities, and towns the conditions favourable to cholera diffusion merely because other countries in the Mediterranean, after neglecting the sanitary state of their ports, are afraid of vessels passing along the high seas, and this although they will not touch at any of their ports. If Italy can induce countries such as France to view the matter in the same light as her own Government did when the Foreign Office at Rome issued the declaration referred to, she will have done much to pave the only way by which Great Britain can be usefully approached on this subject.

DR. WADE may be well satisfied with the discussion he has raised as to the wisdom of retaining the "Latin superstition" as a part of the burden of general education imposed on those who seek to enter the medical profession. He has drawn great attention to this old question, which is not likely even now to be finally got rid of. Professor HUXLEY'S letter to *The Times* only expressed what he has often said before. But it is always pleasant to hear him denounce what he regards as superstition, whether in education or in still more serious subjects. Even when we cannot agree with him, and feel that he is striking at the root of some of our most cherished beliefs, we cannot resist the vigour of his style or fail to appreciate the obvious pleasure to himself of his attack. We cannot help, however, feeling that Mr. HUXLEY'S objection goes deeper than it seems to go. If carried out, it would not stop at Latin, but would extend to literature itself. Science is a hard master, and is apt to brook no divided service. Another voice—a gentler one than Mr. HUXLEY'S, but one of equal authority—has lately sounded a significant note of warning on this bearing of the question, and told us candidly how the devotion to pure science starved in him some of the highest faculties of the mind. Mr. HUXLEY, indeed, says that "medical students, like other people, should have a sound literary training, and that they may obtain it and a sound elementary training in science too before the age of seventeen, if only the Latin fetish ceases to be an object of superstitious reverence." But underlying his views there seems to be an impatience of everything that does not bear directly on practice, or on the science that underlies practice. He has himself so splendid a gift of expression that he is apt to overlook the value of such a faculty to others who have it not, or in whom it needs cultivation and encouragement. It is certain that if the medical profession is to retain and increase its influence on society, it must still cultivate the study of human thought and feeling as well as the study of chemistry, mechanics, and biology. Latin is not only one of the great languages of antiquity in which such a study must be prosecuted if it is to be prosecuted with any success, but it has peculiar uses and associations for the medical men of all countries, as the common language in which their greatest masters have written and in which prescriptions and pharmacopœias are much written. We can, therefore, scarcely wish to see the Medical Council or any of the Examining Bodies discharge medical students from the duty of showing some modest acquaintance with the Latin tongue. It need not be much, but it should be sound as far as it goes. We so far agree with Professor HUXLEY that we should like to see more attention paid to our own noble language, and more inducements to the study of its greatest works. If a medical student could be induced to master the work of one of our greatest historians and one of our greatest poets, to acquire the consciousness and responsibility proper to those—

> "Who speak the tongue that Shakespeare spake,
> The faith and morals hold which Milton held,"

his knowledge of a necessary amount of Latin might be almost taken for granted.

We admit to the full the gravity and the variety of the other subjects in the general and special education of a medical man of the present day, and are ready to pity the poor student who has to face them all and examiners in them all, each of whom is ready to exact his pound of flesh. We think some limitation of area and detail in the examinations to be urgent. The process of education might be made a pleasure. That of examination can scarcely be else than a torture which kills some of our finest students. And this torture is being refined and multiplied most seriously. Some method must be devised of reducing examinations and yet increasing the educative result. There seems but one way out of the difficulty, and that is to increase the *time* given to the education of a medical man. The General Medical Council has already recommended the Bodies to require five years to be spent in medical education. It ought to go further and recommend that students should not commence strictly medical study before the age of eighteen. By this time—we scarcely think by the age of seventeen, as Professor HUXLEY

says—a youth may be fairly grounded in both the literary and scientific elements of a sound preliminary education. One thing we must protest against, that of creating an inferior grade of medical practitioners, good enough to "attend midwifery and administer purgatives," which we were not long since told, on high authority, was all that was wanted in medical practice among the poor, as if pain and pathological processes had not the same importance for the poor as for the rich. This idea has lately cropped up in *The Times* correspondence as if it were the duty of the Medical Examining Bodies to provide a class of practitioners to compete with chemists, not with disease and death. The poor want good practitioners and men of the highest character. Such men will always be forthcoming, if the character of the profession itself is maintained by those who hold its gates and are responsible for the education and registration of its members.

A CONGRESS such as that which recently concluded its deliberations at Berlin naturally suggests many reflections regarding the scope, objects, management, and utility of such gatherings. We as a nation pride ourselves (not quite unjustly) upon being practical, upon looking at things rather than words, upon not allowing ourselves to be the victims of phrases, and upon calmly counting up the net result, the loss and gain, of any undertaking in which we have been engaged. It seems natural, therefore, to the English mind to ask, at the conclusion of an International Medical Congress, what are the practical results, the real fruits, of such a vast concourse of scientists from all parts of the civilised world.

The first question that obviously arises in each mind is whether such gatherings accomplish any genuine scientific advance, whether they add anything to the sum of human knowledge. This question, though a reasonable one, involves some confusion of thought. A Congress is not an instrument of research. It possesses no machinery for the prosecution of discovery. Its object is not the discovery of new facts, but their dissemination; and if from this point of view we ask the question whether congresses advance the cause of science and the area of human knowledge, an answer in the affirmative may be confidently given. They do not create new facts, but they promote their circulation. They bring the great mass of workers into touch with their natural leaders, who are able to impart something of their own knowledge, methods, and enthusiasm. Actual advances in science are not made amidst the bustle and distractions of a great social gathering. It would be wholly unreasonable to expect that they should. Such advances are almost without exception the result of the efforts of solitary individuals in the study or the laboratory. It is a NEWTON, a FARADAY, a HUNTER, a PASTEUR, or a KOCH, following laboriously the light of his own genius and toiling patiently on until the half-formed conjecture becomes a well-developed hypothesis, and the hypothesis becomes a proved theorem; it is such men who accomplish all the epoch-making advances. But when such advances have been really accomplished, when the proof is complete to all capable of estimating the evidence rightly, how much remains to be done to bring the new facts to bear upon human life and practice, to make them fruitful and operative. How hard it is to break down prejudices, and to convince men that many of their cherished ideas are groundless, and many of their favourite methods mistaken. It is here that meetings for discussion and deliberation, for the comparison of ideas and exchange of views, find much of their justification.

Another function of scientific Congresses is to bring the laggards into line with the most advanced thinkers and workers. While it is, no doubt, true that the thoroughly accomplished man of science, who is abreast of the best thought and familiar with the best literature of the day, will learn little at such gatherings, it is far otherwise with the mass of men whose abilities and acquirements are moderate and whose leisure is possibly scanty. Such men, who constitute the bulk of a profession, are sure to be in some departments behind their time. The work of a Congress may prove a wholesome reminder of the fact, and may act as a stimulus towards a higher plane of proficiency and a wider standard of culture. The busy practitioner, involved in cares and labours, feels at such times an unwonted atmosphere surrounding him, an atmosphere scientific rather than merely professional, and he feels how much higher is the pursuit of truth than the pursuit of gain, how much nobler the ambition to strive for the relief of human suffering than to concentrate efforts on selfish advantage.

A Congress, again, serves to mark time, to show us where we are, to remind us of the road already travelled, and to point out to us the line of future progress. There can be no doubt that this has a salutary influence upon the course of research. However slow our progress, and all real progress is slow, it is very reassuring to be convinced that we are moving in the right direction, and that our faces are really turned towards the goal. Such an address as that of Professor KOCH at Berlin reassures those who had begun to fear that bacteriological research was going to end by revolutionising our ideas of pathology without adding anything of moment to the resources of therapeutics. It is comforting to have fresh ground for the assurance that the first step to rational and successful treatment is an exhaustive acquaintance with the origin and natural history of disease.

Of the merely social features of a Congress it is unnecessary to speak, but such a gathering as that at Berlin has an international aspect well worthy of our attention. There is something inspiring in the idea that actually fifty nationalities were represented in the German capital, that Australia, Mexico, Turkey, and Japan joined hands with Germany, England, France, Italy, Holland, Sweden, and a host of other nations. While Europe is still under the curse of militaryism, it is no small gain to have an immense gathering of the most varied nationalities and tongues meeting together under happy social auspices to advance primarily the cause of science, but also effectually, if less directly, the cause of peace and universal brotherhood. No feature of the Berlin Congress was more pleasing than the hearty reception accorded to the French representatives; and no spectator could doubt that if scientific influence were predominant among the nations, international hatreds and feuds would wither and disappear. Men of science need know no rivalry but that of being first to advance the cause of knowledge, of freedom of thought, of the prevention and

mitigation of human suffering. If anyone has a new fact to announce, or a new hypothesis to propound, it matters little what language he speaks or what is the colour of his skin. He will be sure of a cordial welcome if he has anything of value to offer. Science is catholic and cosmopolitan, it knows neither race nor tongue, it recognises no geographical or social barriers, it has only one voice and one invitation to all men—the invitation, namely, to seek to know and to make known, to unravel the secrets of this most wonderful and mysterious universe, to "scorn delights, and live laborious days," in order that knowledge may grow and flourish, and that science may win a final victory over ignorance and superstition.

THE Charity Organisation Society has taken in hand the important question of securing uniformity in the form of account presented by voluntary charities and efficiency in the audits to which they are subjected. The object is one well worthy of the attention which the Society is bestowing upon it; and, moreover, it is not only a matter of great importance, but it is also one that comes peculiarly within the province of the Society. We have therefore every confidence that their labours will be crowned with eventual success; but we must confess to a little disappointment with the report of the committee to which the consideration of the question was confided by the Council of the Society. The question referred, so far as it is necessary for our present purposes, and to quote it, was, "What are the best forms of accounts for charitable institutiens of different types?" The accounts here mentioned are understood to be the published statements of account. The committee, for the purposes of their answer, divide charitable institutions into four types: 1. Small charitable institutions without property, or trading, or indebtedness at the close of the period covered by the account. 2. Charitable institutions having property but not carrying on trading operations, and without current liabilities at the close of the period. 3. Institutions differing from those in Class 2 only in having current liabilities at the close of the period. 4. Institutions having property and carrying on trading or manufacturing operations. This classification has been adopted after careful consideration, and we do not doubt that it is well adapted to the discrimination of various forms of account. But we do not understand, in its entirety, the scheme of accounts recommended for these various institutions. Those of the first class are provided with a simple analysis of the cash book under the title of a receipts and payments account, and this would seem to be perfectly suitable to its purpose. Those of the second class are in like manner provided with a receipts and payments account, differing, however, from the former in this important particular, that the revenue operations of the period are first dealt with, and a balance at this point struck, showing whether receipts or payments are in excess, and the balance then being carried down is included in an extension of the account which shows the dealings with capital during the same period. This annual statement is supplemented, of course, by a balance sheet showing the amount and condition of the Society's property at the end of the period. This form appears to us to leave nothing to be desired, and we should have supposed that it would apply to every case in which an institution was not concerned in commercial operations, and that where such operations are carried on the only alteration required would be the addition of a separate trading account. The committee, however, recommend that where there are outstanding liabilities at the end of the period an entirely different form of account should be adopted. This is explained to be a ledger account by which we presume that the committee mean the published account to be a transcript of an account which appears in the books of the institution. There is, however, no advantage in this identity of the published form with that of the Society's books, and there is the very distinct disadvantage that the statement appears in a form which the majority of people cannot easily understand. Thus whereas in the two forms already considered receipts are placed to the Society's debit, and payments on the credit side of the account—a convention with which everybody is familiar,—the form now under discussion reverses this order, and puts expenditure upon the debit side and income on the credit side of the account. To an accountant we doubt not that this presents no difficulty, but to people whose business lies in another direction than that of the accountant it is sufficiently puzzling to make any effective comparison between two sets of accounts presented in these two different forms impossible. We hope that this point will be reconsidered, and, unless there are much weightier reasons than we are aware of for insisting on such very divergent forms of account, that the final recommendation of the Society will be in favour of one uniform plan.

THE New South Wales Board of Health has issued a report on the administration of the Dairy Supervision Act which was passed in 1886. Under this Act measures can be taken for the improvement of the sanitary condition of cowsheds and dairies, and for the prevention of infection of milk. The chief difference between the precautions which can be taken in New South Wales and those which are taken in England is that in the colony the dairyman is required to notify a number of diseases in animals as well as in those human beings who are concerned in the milk business. The diseases in animals thus notifiable are aphthæ, cancer, pleuro-pneumonia, splenic fever, tuberculosis, and inflammations, eruptions, or warts of the udder. It will be seen, therefore, that in New South Wales there exists opportunity for controlling the sale of milk from animals suffering from maladies which render the milk dangerous to the drinker.

Since Mr. W. H. POWER some years ago associated an eruptive disease of the teats of cows with scarlet fever in man, the study of this and similar affections has been prosecuted with the result that it is now generally accepted that milk from animals suffering from eruptive disease of the udder should not be used for the food of human beings, and this conclusion has been arrived at not only by those who have considered that human infectious disease can be caused by these maladies, but by others who have only recognised the pollution they cause to milk by the introduction into it of purulent matter. The more recent investigations of Dr. KLEIN with regard to diphtheria have necessarily

gone far to confirm the opinion that eruptive maladies of the teats and udder constitute a serious danger to milk drinkers; and, further, whatever views are held as to the amount of danger to man from the consumption of the flesh of animals affected with tuberculosis, there is, we believe, general agreement that the milk of such animals should not be sold.

Under these circumstances it may not unreasonably be asked whether the time has not come when residents in England should enjoy the same amount of protection as those in New South Wales. No doubt such a proposal would meet with some opposition from cowkeepers, but we doubt very much whether a measure with this object would not receive support from the milk trade generally. Vendors of milk in large towns, receiving their supplies from country farms, would, it might be expected, be glad to have the benefit of the protection which would be given their businesses by an enactment tending to exclude the milk of animals in an unhealthy condition. But the chief advantage would obviously be the increased opportunity that would be given for studying eruptive diseases of the udder; indeed, there would be absolute necessity that all interested or concerned in the relation between human and bovine affections should familiarise themselves with udder diseases. When it is remembered how much difficulty has attended the study of cutaneous eruptions in man, and the long period which elapsed before they could be distinguished from each other, or when the confusion which existed in former times between the infectious fevers of man is borne in mind, it is not matter for surprise that affections of the cow of this class are regarded in some quarters as still involved in considerable obscurity. The importance they have recently attained would be materially enhanced if they were the cause of the prevention of the sale of a diseased animal's milk, and it is probable that these maladies would, at no distant date, be capable of being distinguished from each other with sufficient clearness to afford a valuable protection to the health of human beings.

Annotations.

"Ne quid nimis."

EGYPT AND CHOLERA.

UNDER the above heading *The Times* has published a communication from a correspondent in Cairo which is most disquieting as regards the present prospects of Egypt, and which reflects very gravely on the sanitary administration of that country, and for which England is said to be mainly responsible. The fact is that Egypt is at the moment in a state of alarm. Cholera is prevailing within her limits at both of the localities where pilgrims returning from Mecca are detained for quarantine purposes, and the arrangements at those places are neither adequate for the protection of the pilgrims themselves, nor for the safeguarding of Egypt; and the result is that the defective sanitary state of the country, and especially of Cairo, is looked upon as involving so much risk that many who can afford to do so are preparing for flight. The main complaint made by the Cairo correspondent is to the effect that whereas an Internal Board of Health was appointed nearly seven years ago in supersession of the useless Sanitary Board which then existed, little or nothing has been done by the new board to improve the sanitary state of the country, and that a system of "favouritism and nepotism" in making the new appointments has been the main cause of the alleged neglect. In support of this general complaint, certain specific instances of default are given. Thus, it is implied that the water-supply for Cairo is utterly filthy, and it is stated that one of the "minor" objections to it is that the intake is situated about one hundred yards below Kasr-el-Nil barracks, where there is a bathing place for the troops, and where the river bank is used as a latrine by the natives. Such specific condemnation of the existing state of affairs can hardly go unanswered; but we hope that the general complaint is exaggerated, and that the absence of any record as to real improvement has been due, not to the fact that there is nothing to record, but to the prominence which the defects acquire in the face of a possible cholera epidemic. There is a general impression amongst those Europeans who have lived in Cairo for some years that some distinct improvement has taken place in the sanitary state of the place. It is, of course, possible that the improvements may be only on the surface, and this view is rather supported by the distinct allegations of neglect set forth by the Cairo correspondent, and by the heavy rate of mortality which prevails in the Egyptian capital. One thing is evidently needed, and that is that the sanitary administration of the city should be carried out on principles which can only be defined by a medical expert who is fully conversant with the causes of disease and their methods of prevention, and who shall at the same time devote his entire services to the authority to whom he is responsible.

PUBLIC DRUNKENNESS.

IT is a fine question how far convictions for drunkenness may be relied on as a criterion of the amount of alcoholism in any given community. But they are one of the criteria, and are thought of sufficient importance to be made the subject of a return to the House of Commons. In any aspect—social, moral, or legal—they are of considerable importance, and give rise to a great number of questions. We have the returns before us for England and Wales for such offences as involve drunkenness. We can only notice the principal points. How shall we fix a standard of virtue and vice in this question? We do not know. All we can do is to note the communities which drink little and contrast with them those which drink much, in the hope that the latter may feel moved to imitate the former. The contrasts are very great, and make us curious to know whether police morals in one community are not more austere than in another. To show, almost at random, the greatness of the contrasts: in the county of Norfolk 292,209 people yield only 389 convictions, whereas in the county of Northumberland 230,611 people yield 2488. The north of England towns have the discreditable distinction of drinking most heavily. Take Tynemouth, for example, with a population of only 44,118, there are 1706 convictions, whereas Hastings, with a population of 42,258, only gives 94 convictions. The borough of Tynemouth, with its 44,118, had almost as many convictions for drunkenness as the whole county of Devon with its 420,453. In the Metropolitan Police District, with its 4,716,000, there are 20,365 convictions. If the convictions in this district were at the same rate as in Tynemouth, there would be 180,836, instead of 20,365. It may be said that the port of Tynemouth draws to itself a motley group of men from all nations, and a floating population. But Portsmouth, with a somewhat similar population, has 127,989 people, and only 291 convictions. Cardiff has a population of 82,761, and 701 convictions. The enlightened town of Newcastle-on-Tyne might be expected to be at least as little convicted of drunkenness as

Leeds, but Leeds, with a population of 309,119, has only 1044 convictions, whereas Newcastle, with 145,359, has 3144. The city of Liverpool, with 552,508, has 15,491 convictions, or ten times as many as the county of Kent, which has a population of 430,914, and 1509 convictions. Another return gives the arrests for drunkenness in Ireland *on Sundays* in its chief cities and its counties. The chief facts about Irish drunkenness, so far as that can be judged by the number of arrests for drunkenness within the chief cities of Ireland, are as follows. We shall arrange the cities in the order of their population, as given in Churchill's Medical Directory. Unfortunately, in the Irish return the population of the different districts is not given, unlike the case of the returns for England and Wales. It will be observed that the arrests are those *on Sundays* between May 1st, 1889, and April 30th, 1890:—

	Population.	Total arrests.
Dublin	249,602	1545
Belfast	208,122	225
Cork	80,124	227
Limerick	38,562	279
Waterford	22,122	141

It is noticeable that Limerick, with less than half the population of Cork, has more cases of drunkenness, and that both Cork and Limerick, with populations so much less than Belfast, have a greater number of cases. Belfast, with only 41,480 less of population, has not a sixth part of the drunkenness of Dublin. We should be careful not to attach too much importance to a comparison of these figures. We are not clear as to the facts of population being at all accurate so long after the last census, and different standards of severity may rule in different cities as to the amount of drunkenness that justifies arrest. "They that are drunken are drunken in the night" is particularly true of Irish drunkenness. Of the 1545 arrests in Dublin, no less than 995—roughly, two-thirds—occurred between 7 P.M. and 12 P.M. In the other cities, of 872 arrests, 495 were between these hours. Such facts indicate what is well known, that the later hours are those in which most of the bad drinking takes place. We should not be discharging our duty if we did not give prominence to these returns, and warn communities of the significance of their position in them. England is taking a very active and creditable part in the attempt to prevent the importation of alcohol into the interior of Africa to the demoralisation of its native races. Charity begins at home. It cannot do better work than labour to abate the alcoholism of home communities, thriving and well employed, but kept back by the vice shown in these returns. This is no work for mere teetotalers to do. It demands the coöperation of every intelligent and sober man, who, by reason or example or suasion, can influence his fellows, and keep them from disease and premature death.

RAILWAY ACCIDENTS.

THE annual report made to the Board of Trade upon railway accidents shows that during the year 1889 the mischief arising from this source was somewhat less than the average of ten years past, though rather greater than has been the case during the more recent part of that period covering the last two or three years. Rightly or wrongly, the Board and the companies appear to proceed on the tacit assumption that things cannot be much bettered now, and that the casualties which occur under the existing *régime* represent little more than the irreducible minimum of accident which must in any case be expected to attend upon operations so extensive and so complicated as those of the railway traffic of the United Kingdom. No doubt such a view is not to be found expressed in terms in the present or any other authoritative document; but we think that it distinctly colours the whole report, and leads the Board of Trade to be content with very mild remonstrances and very gentle blame. Yet the report itself shows that there is much room for improvement, and that serious accidents are constantly occurring for want of the adoption of well-recognised precautions. The use of a proper brake is a case in point. The principles upon which a railway brake should be constructed and the tests which it ought to satisfy are perfectly well understood, and have been well understood for many years past; yet at the present time the number of vehicles equipped with such brakes does not exceed 80 per cent. of the number of vehicles in use. The importance of an improvement in this particular is painfully illustrated in the present report by the fearful disaster which occurred in June of last year near Newry, when a train filled with Sunday-school children was wrecked through running down an incline in consequence of being held by insufficient brake power. Another point of scarcely less importance which receives new emphasis from every successive report is that of the impropriety of overworking railway men. One of the inspectors alludes to it in the following terms, which seem to us quite inadequate: "I regret also to have to refer to the number of instances in which servants of the companies, performing duties connected with the trains to which accidents occurred, had been at the time of the accident on duty for a large number of hours." It may be that the official conscience is satisfied with a merely perfunctory reference to this standing outrage on humanity; but the public take a more serious view of it, and we trust that before long public opinion will find suitable expression in a form which the managers of the companies will find it inexpedient or perhaps impossible to disregard.

CREASOTE IN PHTHISIS.

A VERY excellent paper, by Dr. W. H. Flint, on the Dosage and Administration of Creasote in Phthisis, appears in the *New York Medical Journal* of July 26th of this year. Creasote has long been suggested as a remedy for phthisis. Rosenthal in 1888 published the results of some experiments he had made, using creasote in carbonic acid water, and found that a sufficient quantity of dissolved creasote could be injected hypodermically into rabbits to produce a dilution of one to four thousand in their blood without any injury to the animal. Koch had already demonstrated that tubercle bacilli in artificial media are destroyed by very dilute solutions (1 in 4000) of creasote, and thus Rosenthal suggested that sufficient creasote might be absorbed into the circulation to destroy the tubercular organism. From time to time investigations have been made with the use of hypodermic injections in the human subject, sterilised oil being used as the medium for holding the creasote. The results of these experiments have not, however, been very satisfactory. Dr. Rosenbusch tried pulmonary injections of creasote, and published good results, but other observers have not been so successful. Dr. Flint's experience embraces seventy-three cases, among which there have been examples of all stages of phthisis. The cases were divided into three classes according to the methods of treatment adopted: (1) Those in which creasote inhalations were alone employed; (2) those in which creasote was administered both by inhalation and by the stomach or rectum; and (3) those in which the drug was given by the stomach or rectum. This subdivision was made with a view to ascertain which mode of administration yielded the best results, or whether a combination of both modes was most advantageous. Neither of the above-mentioned methods invariably produced the best results. The inhalation method was naturally most successful for patients whose gastro-intestinal tracts were diseased, while the other methods were more satisfactory in cases where the digestive organs were in a fairly healthy condition

The solutions employed were always those containing equal parts of creasote, alcohol, and chloroform. The inhalations were used very frequently. When given by the mouth or rectum, Dr. Flint adopted the use of an emulsion composed of forty parts of cod-liver oil and sixty parts of mucilage of acacia, each drachm containing two minims of creasote. When possible the creasote emulsion was administered in milk, being thoroughly mixed with the latter by means of energetic shaking. More of the drug could be given in this manner, without exciting gastric symptoms, than by any other method. For enemata, one or two drachms of the emulsion, containing respectively from two to four minims of creasote, may be shaken up with four ounces of milk, and such an enema may be given every five or six hours. The conclusions arrived at by Dr. Flint are—(1) That intra-pulmonary and intra-tracheal injections of creasote are of doubtful utility, and may be positively injurious; (2) that, for administration by mouth or rectum, solutions and emulsions of creasote are preferable in most cases to capsules, pills, or wafers; (3) that milk is an excellent vehicle for the administration of creasote in solution or in emulsion; (4) that each method, by inhalation, by mouth or rectum alone, or by both these channels simultaneously, is useful, and may each be particularly adapted to individual cases; (5) that the best results for each individual attend the administration of the maximum quantity of creasote which this patient will bear; (6) that the average patient will not easily tolerate more than ten or fifteen minims of creasote per diem for any great length of time, and that many will only bear two or three drops per diem cautiously given; (7) that it is very important that the treatment be uniform and uninterrupted; (8) that, consequently, an effort should always be made, if intolerance of creasote is shown by any one mucous surface, to employ some other channel of introduction, in order that the continuity of the treatment be not interrupted.

SUNBURN AND SNOW.

DR. ROBERT BOWLES' observations on sunburn in the presence of snow is a good illustration of the way in which a holiday may be utilised by a man of science. It was already known that the effects on the skin of exposure to the sun were aggravated whilst travelling over snow. He found, in addition, that these effects were still more pronounced if the snow had recently fallen. This may be accounted for by the reflection being greater with recent snow, as the crystalline structure would be more perfectly preserved. Dr. Bowles also found that when mountaineering he escaped sunburn by painting his face brown, while all his companions suffered considerably. The natives of many tropical places have found this fact out for themselves. Thus, the inhabitants of Morocco and of the Sikkim hills blacken the skin round the eyes to protect themselves from the glare of the sun on the sand on the one hand, and on the newly fallen snow on the other. The Fijians also, when fishing on the reef, exchange their red and white stripes for black for a similar reason. From his own observations and the above considerations, Dr. Bowles concludes that sunburn is due to the actinic rays rather than to the heat of the sun. This, however, cannot be altogether correct, as while the actinic effect may be almost as powerful from objects not directly in the sun's rays, as may be seen by their effect on the photographic plate, no one suffers from sunburn except when exposed to the sun's direct rays. Moreover, a similar dermatitis may be excited in puddlers, stokers, blacksmiths, and others exposed to artificial heat. With regard to pigmentation, the case is somewhat different; it may also be produced locally in those above mentioned whose occupations expose them for long periods to great heat, and that, too, in parts covered by the clothing; but this is only a consequence of repeated and prolonged hyperæmia. On the other hand, the effect of sunlight, even without direct exposure, in rendering pre-existing ephelides and similar pigmentations more prominent and in developing fresh ones is well known. The sun also produces pigmentary disturbance indirectly through the nervous system, as may be seen in melanoderma and leucoderma, in which there is excess followed by deficiency, which may in some cases be shown to follow sun exposure. On the whole, then, while the actinic rays play a certain part in the process of sunburn and subsequent pigmentation, it must be admitted that the heat rays play a large, and probably the largest, part in producing the unpleasant results of direct sun exposure.

OVERCROWDING OF RIVER STEAMERS.

MANY pleasure seekers will feel a certain sympathy with one of the officers employed by the Victoria Steamship Company who was lately convicted of having allowed his vessel to be greatly overcrowded. The particular circumstances of the case were such as fortunately do not occur very often. Fine weather had rendered the summer Bank holiday particularly attractive, and the boat, the last for the day, was regularly boarded by a swarm of excursionists gathered on the pier at Southend. These considerations, however, merely qualify, they do not excuse, the fact that on reaching London she was overloaded by more than half her allowed passenger freight. It is true that she discharged her burthen safely, but this does not justify the risk incurred. One must in all such cases allow for possible accidents. The condition of a small, belated, and deeply laden vessel on a narrow river traversed by moving craft, certainly does not impress one with an idea of safe navigation. It is highly probable, moreover, that river boats in general, no less than trains and tram-cars, are liable to frequent accessions of passenger congestion. The need and the prudence of adopting exemplary measures of correction in the instance above mentioned must therefore be admitted in spite of any so-called extenuation of the offence. Such measures are sure to prove useful, not only by compelling some limitation of the holiday throng on landing stages, but also by promoting such increase of the river boat service as will meet any probable emergency.

DEATH UNDER CHLOROFORM AT ST. HELENS.

A CASE of death occurring under chloroform, reported by the *Liverpool Mercury*, is deplorable for more than one reason. The facts as stated by our contemporary are as follows:—A female patient aged sixty, the wife of a glassblower's labourer, sought advice from Mr. Pennington, a surgeon practising in Liverpool. The woman had suffered, it appears, for nine weeks from whitlow, which had progressed so far as to necessitate amputation of the finger. With a view to this operation, Mr. Pennington had the woman admitted into the St. Helens Cottage Hospital, telling the husband that the operation would necessitate the attendance of a "specialist" to administer chloroform, and that a fee of two guineas would be requisite for him. To this the husband seems to have assented, saying he would try to obtain the fee. The operation was to have taken place on the Thursday, but, as no formal consent was given by the husband, Mr. Pennington did not operate or see the patient upon that day, although in his evidence at the inquest he stated he was prepared to do so had he received the consent of the patient's husband, and would have arranged the chloroform fee himself. He considered it necessary to have a skilled anæsthetist for operation cases. The husband, however, called in Dr. Casey, of Sutton, St. Helens, who upon the Thursday evening went to see the patient in the hospital, directing the husband

to go to Mr. Pennington's surgery to acquaint him with the fact that Dr. Casey had been called in. The account of Dr. Casey's evidence runs: "He considered it necessary that the finger should be at once amputated, as it was in a state of mortification and was rotten. Chloroform was accordingly administered and respiration immediately ceased." As Dr. Casey does not mention the presence of any second medical man, we can only infer that either he administered the anæsthetic and operated, or was prepared to operate single-handed, or entrusted the chloroform to the nurse, either of which proceedings cannot but be deemed open to grave criticism. The want of professional good-fellowship which the evidence appears to bring out lends an additional regret to the case. Without wishing in any way to impute or even to suggest carelessness in the administration of the chloroform, we feel bound to express most emphatically that no operation requiring an anæsthetic should be undertaken, save under the most urgent circumstances, without the presence of two or more duly qualified surgeons.

EXPERIMENTAL INFECTION WITH MILK FROM TUBERCULOUS COWS.

DR. KARL HIRSCHBERGER has made, at the request of Dr. Bollinger, a series of experiments in the Pathological Institute at Munich on the inoculation of animals with milk from cows in various stages of tuberculosis. He attempts to answer the following questions: — 1. Do tuberculous cows frequently give infectious milk, or is their milk only exceptionally infectious? 2. In which forms of tuberculosis is the milk infectious—in localised or only in general tuberculosis? He made twenty experiments, and calls attention to the fact that inoculation alone can give decisive results, because it is very difficult to observe tubercle bacilli microscopically in the milk, and impossible to discover their spores. On the strength of his experiments he states that the danger of infection from the milk of tuberculous cows does not only exist, but is very great, being found in 55 per cent. of all cases examined. The more the tuberculosis has spread the greater is this danger; but even in mild cases of localised tuberculosis the milk is, he considers, more or less infectious.

FALSE EVIDENCE IN CORONERS' COURTS.

MEDICAL men are liable to have loose and false statements made of their conduct even before coroners, and under other public circumstances. Even eminent men are not free from this risk. Lately at Birmingham, at an inquest held on the illegitimate and recently born child of Ada Dugard, her mother made the statement that she was quite unaware of her daughter's pregnancy, though she had taken her to the Women's Hospital, where she was treated for dropsy, and had been seen repeatedly by Mr. Lawson Tait, who would not allow her to speak. Mr. Lawson Tait was of course able to give a very different version of the facts, and has since done so in the local papers. He shows that both by his assistant and himself the pregnant woman and her mother were clearly told of the pregnancy, and advised accordingly. The coroner was misunderstood to say that he had known several cases where an illegitimate pregnancy was mistaken for dropsy. He has since disclaimed any such meaning, especially with reference to Mr. Tait. We accept, of course, his disclaimer. But we exceedingly regret that he did not adjourn the inquest to have the case elucidated in all its legal bearings and its moral significance. It does not matter much to a man of Mr. Tait's reputation to have his conduct misrepresented. But when such extraordinary facts happen and such statements are made, it would be better for the coroner to clear them up in his own court. The bold and blind resistance to facts which young women who become illegitimately pregnant show is a matter of common and painful experience among medical men. But their mothers, though very much to be pitied, are not to be excused when, as in this case, they asperse the skill or the kindness of those who advise them. Opportunity should be given to hear those who are aspersed. A coroner's court may otherwise become a mere occasion for gossip and libel.

THE POTATO DISEASE IN IRELAND.

As might have been expected after so damp a summer as that just over, the potato crop this year has not been a success. The tubers have been unusually heavy and watery. Reports from Ireland state that in some districts disease has been markedly prevalent, and is believed to have given rise to fever of low type and to choleraic diarrhœa. It is not remarkable that symptoms like those of a semi-typhoid character should arise from this cause. Potato disease or blight there is good reason to believe is as much a parasitic and infectious disorder as typhus or typhoid fever itself. According to Berkeley and other authorities it is produced by a vegetable fungus, and the diarrhœa to which it gives rise in the human subject is probably septic. The leaves, the stems, and the tubers of the potato are invaded in succession, and commonly at an early stage in the growth of the plant. As regards the human sufferer, no remedy can of course give a satisfactory result until the poisonous diet is discontinued. In the case of the vegetable, docking of the stems, combined with a top dressing of earth, has occasionally been of service in saving its esculent part; but here again a difficulty is apt to arise, inasmuch as healthy growth underground is dependent on the action of sun, rain, and atmosphere on the parts exposed to them. Nevertheless this method has repeatedly succeeded in the past, and should not be lost sight of. For the rest, the maintenance of dry soil, either by thorough drainage or by admixture of sand with the natural earth if damp and tenacious, should prove beneficial, especially in a country so copiously watered as Ireland.

ON BRAIN AFFECTIONS IN LEAD POISONING.

DR. EDGREN, writing in a Swedish journal, demurs to the view that coma and convulsive symptoms in lead poisoning are necessarily connected with renal affections, and mentions the case of a woman in the Serafina Hospital at Stockholm who had been working for a year and a half in a manufactory of glazed china. Once only during the whole time she was under treatment, and then immediately after an epileptiform seizure, was a trace of albumen found, which on the next day had entirely disappeared. The convulsive attack differed from ordinary epilepsy, as the clonic convulsions preceded the tonic, and no dilatation of the pupil took place. Both in this case and in another of less gravity lead was found in the urine; in the latter, to the amount of four milligrammes in six litres.

THE SMOKE NUISANCE.

A DISCUSSION of much practical interest was lately carried on at Oldham Police-court respecting the abatement of the now almost universal smoke nuisance. Dr. Patterson, medical officer of health, appeared as prosecutor, and the defendants were three prominent spinning-mill companies. Their alleged offence consisted in allowing the emission of an amount of black smoke in excess of that sanctioned by the local sanitary authority—namely, such an amount per hour as would pass from the chimney during twelve minutes. In the course of the case a magisterial order was quoted which has materially added to the comfort of Bolton. By this injunction manufacturers are obliged to adopt and maintain some efficient form of smoke-

consuming apparatus. The result has been a great decrease in the quantity of foul smoke emitted. There can be no question that the emission during every working hour of more or less dense volumes of smoke is little conducive either to purity of atmosphere or its natural adjunct, health. Though consisting mainly of carbonaceous gases, it is liable to be associated with other deleterious fumes, as those of acids, sulphur, arsenic, and various organic substances. There can hardly be any injustice, therefore, in requiring the smoke producer to lay out a reasonable sum in protecting his neighbour against miasmata which yield him no return but their own unwholesomeness.

HOLIDAY ACCIDENTS.

WE cannot forbear a word of sympathy in regard to the fatalities which have so shocked the public in these holiday days, involving valuable lives, including that of Mr. Thompson, a medical student of Birmingham, and Mr. Charles Greene of Shropshire, a Member of the Royal College of Surgeons, who had passed through a distinguished career at both Queen's and Mason's Colleges. Surely a little more care might be taken to avert such tragedies.

THE TREATMENT OF PULMONARY PHTHISIS.

KOCH'S views on the treatment of phthisis pulmonalis have received interesting support from the experience of a chemist, Herr Reuter, made public in April last at a full meeting of the Lower Austrian Industrial Union. Koch, it will be remembered, maintained at the Berlin Congress that among the remedies capable of bringing the malady to a standstill the salts of gold and silver are of the greatest value, and that among these the first place must be given to "cyan-gold." Reuter, who, as director of great *fabriques* of metallic wares at home and abroad, paid particular attention to those in which the articles in question were galvanically gilded or silvered, observed that in the latter industry the *employés* who had consumptive or tubercular symptoms, some indeed who suffered from hæmoptysis, found marked relief in their work, and continued to improve so rapidly that in a few weeks their return to health was assured. The favourable impression made on Reuter, as to the curative effects of the gold and silver industry on phthisis, he found confirmed by the testimony of *employés* of every age in these establishments—men, young and old, who had the well-known symptoms of pulmonary consumption, even at an advanced stage, rapidly getting well as they continued from week to week at work. Further investigations strengthened that impression still more, till he had satisfied himself that for the disease in question a healing virtue resides in the prussic acid generated particularly in those workshops where "cyan-metals" dissolved in "cyan-kalium" are used. Impressed by Koch's views, the Medical Association of Vienna has since bestowed special consideration on Reuter's experiences embodied in the paper read before the Lower Austrian Industrial Union last April, and, while admitting the confirmation given to those views by Reuter, it is of opinion that the honour of priority in discovering the efficacy of gold and silver salts in the treatment of phthisis pulmonalis belongs undoubtedly to the latter.

ALCOHOL IN HOSPITALS.

THE *Alliance News* of Aug. 15th publishes a statement purporting to show the consumption of alcohol in various leading hospitals in the United Kingdom and the average cost per patient. Elgin seems to spend most on alcohol—7*s.* 10*d.* per head—and Swansea the least—1½*d.*,—always of course excepting the Temperance Hospital, which is supposed to cure its cases without this medicine. We are not disposed to rely much on such statistics by themselves. They would have to be carefully criticised in connexion with individual cases to convey any accurate information to the medical mind. It is certain, for example, that the antiseptic treatment of severe injuries has reduced the necessity for alcohol in such infirmaries as Newcastle and Glasgow, where we find the charge per head at the moderate rate of 1*s.* 9*d.* and 1*s.* 8¾*d.* We have noticed elsewhere the heavy convictions for drunkenness at Newcastle-on-Tyne. It is gratifying to find that its eminent surgeons and physicians find a very moderate need for stimulants in the grave cases that have to be treated in the Newcastle Infirmary. The less teetotalers interfere with the medical treatment of cases the more will they secure the respectful consideration of their own views.

FOREIGN CHOLERA INTELLIGENCE.

CHOLERA tends to make progress in Spain. During the week ending the 23rd inst. no less than 432 attacks and 215 deaths were recorded, bringing up the total to 2314 attacks and 1167 deaths since the commencement of the epidemic. The provinces now infected are Valencia, Alicante, Castillon, Taragona, Badajoz, Carthagena, and Toledo; and there is every reason to believe that the official statistics received from the infected localities fail to give account of all the cases that occur. France remains free from the disease, and this notwithstanding an emigration from Spain across the French frontier of over 20,000 persons. Of these, only seven were detained, for a period varying from twenty-four to forty-eight hours, on account of suspicious symptoms, and none of these turned out to be true cholera. The dispersion of the pilgrims from Mecca and the other neighbouring holy places has been taking place on a large scale, but cholera still prevails both at Mecca and at Jeddah. According to a communication by Dr. Proust to the Consulting Sanitary Committee of France, 2727 cholera deaths had occurred at Mecca up to the end of last week and 1083 at Jeddah. At El Tor, the principal Egyptian quarantine station, vast numbers of pilgrims are assembled, and cholera is prevailing there also, and it has been decided to establish a second station at Rasmallag, in the Gulf of Suez, which is patrolled by a steamer to prevent the pilgrims from crossing. Cholera has also been imported into Durban by coolie immigrants arriving from India by steamer; but so far it has not extended beyond the coolies, who are detained by the Natal Government. Japan is also reported to be suffering from cholera, the disease having broken out at Tokio.

TESTS FOR SUGAR IN URINE.

DR. JOLLES of Vienna has examined more than 600 specimens of suspected saccharine urine by the phenyl hydrazin test proposed by Von Jaksch, with the result that it apparently showed the existence of sugar, when other tests showed its absence, in four cases. It is therefore not entirely trustworthy; nevertheless Dr. Jolles considers that it may, in conjunction with other methods, prove of valuable assistance in detecting the presence of small quantities of sugar. The way in which he performs the test is as follows: Six or eight cubic centimetres of urine are put in a test-tube and twice as much hydrochlorate of phenyl hydrazin as will lie on the point of a knife with a somewhat larger quantity of acetate of soda, and the mixture warmed until the salts are dissolved. If this does not occur a little water is added. The test tube is subsequently placed in boiling water for about half an hour and then in a glass of cold water. If there is sugar, a yellow crystalline precipitate of phenylglucazon results.

As to sensitiveness, in a simple solution of sugar in water 0·024 per cent. can be detected by this means. A solution of saffron forms, according to Crismer, a very sensitive test for sugar in the urine, glucose having the power of decolourising such solutions completely even when present in very minute quantity. The test is performed as follows: Two cubic centimetres of liquor potassæ are mixed with one cubic centimetre of the urine to be examined, and the mixture added to five cubic centimetres of a solution of saffron of the strength of 1 in 1000. Decolouration shows that sugar is present. Sometimes normal urine contains sufficient sugar to produce this effect. At least three times as much saffron solution as urine must be used. The less of the former in proportion to the latter, the more delicate the test. It would appear that this reaction might easily be made the basis of a very simple quantitative test for sugar in the urine, which would require no boiling, and where there would be none of the difficulties or uncertainties which accompany the present processes for that purpose.

LONDON "SANDWICH MEN."

THE formation of a boardmen's trade union may prove of benefit not merely to the men themselves, but an advantage to the health of the community at large. There are, it is said, 7000 sandwich men in London, who live for the most part in Bethnal-green and in the neighbourhood of Seven Dials. They belong to the very poorest sections of the population, and represent the social wreckage of modern civilisation. They have no homes, and sleep for the most part in low-class hovels, common lodging-houses, and street corners. Their earnings—1*s.* 4*d.* to 1*s.* 6*d.* a day when in full employment—are miserably insufficient. Of course they dress in the poorest clothes, and cannot be expected to maintain any very rigorous personal cleanliness. Yet from haunts the poorest, lowest, sometimes of the most unhealthy description, 7000 of these men daily issue to stroll up and down our principal and most fashionable thoroughfares. Undoubtedly, if they can organise into trade societies with whom advertisers could contract, then the 2*s.* 2*d.* to 2*s.* 6*d.* paid for boardmen would go direct into the pockets of the individuals who actually carry the boards. This would not represent a fortune, but still it would be an increase of about 40 per cent. on their present earnings. They might then be able to live better, display more care in the matter of personal cleanliness, and thus be less likely to disseminate disease in our most frequented streets.

APPRENTICESHIP OR SLAVERY?

OF most forms of cruelty we may say that their consequences outlive the actual suffering inflicted. This is true in a particular sense of the hardship endured by many, if not all, of those Italian children whose picturesqueness and pennyworth of rambling melody have so great an attraction for certain almsgivers. Recent statements in the daily press will have acquainted most of our readers with the details of daily drudgery and ill-usage endured by this class of childish toilers. Purchased for a few shillings of needy parents belonging to the lowest class of the peasantry, they become the forced apprentices of their new owners, the *padroni*. To these men they are nothing but a means of livelihood, and their treatment would appear to differ but little from that of the labouring animal. They are virtually mere live stock on the farm of their possessor, who often owns as many as fifty children. Their earnings are entirely his, and their success in exciting charity is their sole guarantee for ordinarily kind treatment. The habits and vices of the slave become engrained in their character. They grow up, boys and girls alike, ignorant, drunken, idle, and profligate, knowing no trade, living by beggary, and contaminating all about them with the contagion of immorality. Benevolent societies have endeavoured to check the evil by directing against it the authority of the Government, and we may regard the Cruelty Prevention Act as being in part an answer to their representations. By this measure the age of protection, it will be remembered, has been raised to fourteen and sixteen years in the case of boys and girls respectively, a period which must include the great majority of these itinerant children. In dealing with their troubles or delinquencies the machinery of the School Board, the police, and the Cruelty Prevention Society might each and all be profitably utilised. There is, indeed, available in different quarters a fair amount of serviceable organisation. What still is needed is a due recognition of the fact that this in its various forms must be vitalised and combined in order to meet effectively the requirements of the case in question.

ALCOHOL, MORTALITY, AND SICKNESS.

AMONG much other valuable statistical information contained in the Year Book edited by Mr. H. H. Hayter, the Government Statist of the Australian Colony of Victoria, is a report on Australian friendly societies which is full of interest, both direct and indirect. The mortality and sickness statistics of friendly societies have distinct value and interest from a public health point of view, but unfortunately in this country they are generally treated in a too strictly actuarial and financial manner for use in the interest of public health. It appears from the Victorian Year Book, 1888–89, that the number of societies in that colony at the end of 1888 was 32, containing 75,586 members. The death-rate in these societies ranged in the nine years ending 1888 from 9·26 per 1000 in 1880 to 11·28 in 1887, while in 1888 it fell again to 10·45. It must be evident that the tendency in friendly societies, with a rapidly increasing number of members, must be to increased mean age, and also to increasing death-rates. The mean annual number of days of sickness in these Victorian societies appears to be remarkably steady, the extreme range during the nine years 1880–89 being from 9·1 in 1881 and in 1883 to 8·5 in 1884. Based upon the statistics on this subject published by Mr. Hayter in his Year Book, and in his special report on friendly societies, an article on "Comparative Mortality and Sickness in Friendly Societies" somewhat recently appeared in the *Age* (Melbourne), having apparently for its object to prove that societies which make a specialty of abstinence from alcohol show the apparently paradoxical results of a low death-rate together with a high sickness-rate. This result has been arrived at before by other persons dealing with friendly society statistics, and its bearing upon the value of alcohol as an article of diet is of sufficient value to encourage the hope that the subject may receive more attention and investigation at the hands of competent statists. In the article to which we refer space probably prevented the subject being treated in sufficient detail to make it possible to estimate at their true value the conclusions arrived at. It is necessary to know for this purpose the relative numbers of members of the abstaining and non-abstaining societies, as well as the relative age-distribution of the members of these two classes of societies. We are told that the available facts show that "Rechabites live longer lives than Oddfellows and Foresters, but that such lives are less healthy and vigorous, or else that there is something in the circumstances of the members tending to develop a propensity for declaring on and staying on the sick fund." It is obvious that the lower death-rate in abstaining societies would tend to raise the mean age of the surviving members, and the incidence of sickness invariably increases with age. Therefore it is absolutely necessary to take the age element

fully into account when comparing sickness-rates. According to the article to which we have referred, the sickness-rate in abstaining societies, among members aged between twenty and fifty years, considerably exceeded the sickness-rates prevailing among Foresters and Oddfellows; whereas among members aged between fifty and eighty the opposite result is shown. The ages of the members must be analysed in far greater detail than this in order to enable a sound comparison to be made between the sickness-rates in these two classes of societies; but it is asserted, on the faith of these Victorian statistics, that not only is a higher sickness-rate suffered by abstainers (in spite of their lower death-rate), but that abstaining, in its effect on the sickness-rate, is more harmful among the members below middle life than among those above that age. Such apparently paradoxical results are probably due to an insufficient basis of facts to yield trustworthy conclusions. The subject, however, is eminently deserving of further investigation.

"NERVE NÆVUS."

THE *Medicinische-Chirurgische Rundschau*, in reporting on a case of "nerve nævus" which had been communicated by Dr. Unna to the Medical Association at Hamburg, mentions that so far only three cases of this rare affection had been described, and that it had been named by some Ichthyosis linearis neuropathica. The disease is marked by peculiar streaks, which, starting from the superior portion of the glutei and proceeding across the bend of the knee to the inner surface of the tendo Achillis, extend along the dorsum of the foot up to the small toe. These streaks consist in the upper portion of flat papules, partly covered with scales, but lower down they gradually present a more uniformly raised and indurated appearance. In the case presented by Dr. Unna the affection had appeared in the second year of the child's life, and remained almost unaltered. He rejects the hypothesis of any connexion of this disease with the peripheral cutaneous nerves which is advanced by previous authors, because it follows an entirely different course to that taken by the nerves. He considers it more probable that the so-called "lines of fissure" observable in the embryo offer a hint of the true explanation.

FLUSHING THE MALE BLADDER WITHOUT A CATHETER.

STAFF-SURGEON DR. ROTTER of Munich recommends the following process of flushing the male bladder, which offers the advantage of saving the patient the introduction of a catheter and of making it impossible to introduce septic matter with the instrument into the bladder. An irrigator, filled with a quart of some disinfecting, and perhaps slightly astringent, liquid, at a temperature of from about 82·5° to 86° F., has a tube 6 ft. or more in length, with a perforated and somewhat pointed end. This end is, according to the size of the meatus, covered with more or less gauze, which has previously been saturated with the disinfecting fluid, and is now made greasy with antiseptic vaseline. For patients with a very small orifice a very thin gutta-percha drainage-tube, a few inches in length, is attached to the end of the tube. The tube is exhausted up to its end, and completely filled with the warm fluid. The patient is told, if possible, to micturate, and then to lie on his back, with his legs a little drawn up and the pelvis supported. The end of the tube is then introduced into the urethra to the length of about an inch and there held fast by the medical man, who continually presses the glans against the tube. The irrigator is then raised first one metre high and then two, and from half a minute to two minutes, or in patients with a very strong sphincter in three or three minutes and a half, the liquid begins to flow into the bladder. The amount is easily controlled if the irrigator is made of glass, and if not by the vibration which is communicated to the corpora cavernosa. If it is intended to completely fill the bladder, percussion, the appearance of the bladder above the symphysis, and in many cases the patient's sudden desire to micturate, will give the necessary information.

FIRES IN WORKHOUSES.

THE Holborn Board of Guardians have lately had under their consideration the question of escape in case of fire occurring at their union infirmary at Highgate. The present means of exit are certainly not perfect, either as regards their number or their arrangement. They consist of two main staircases, which meet on the lower floor of the central building, and in spite of their alleged fireproof character could not be relied upon to provide adequate means of escape. They would, on the other hand, serve as excellent conductors of air towards any fire which might break out at the basement of the building. It has been proposed, therefore, that bridging passages be thrown out so as to connect the central with outlying buildings, thus providing two additional exits. To do less than this would hardly justify any considerable increase of outlay. The plan has not yet been fully discussed, however, and by some of the guardians it is viewed with little favour. On the one hand, the plea of no necessity, on the other that of heavy expense, has formed an objection. Meanwhile, it may be taken as a hopeful sign that the proposed change has been referred for further and early consideration. In view of the disastrous issues which would almost certainly attend the occurrence of fire in such an institution, peopled by more or less helpless inmates, it is to be hoped that at least one additional outlet will be provided for the male and one for the female section of the building. Guardians, whether at Holborn or elsewhere, need never doubt that the great majority of ratepayers will sanction any reasonable expenditure in a matter of such vital importance.

CRUEL NEGLECT OF CHILDREN.

NOT even the Society for the Prevention of Cruelty to Children has often reported so gross a case of neglect as that in which it secured a conviction at Leeds a few days ago. Four children—three naked, another scarcely clad, and all infested with vermin—were found in a house which rivalled even its occupants in destitution. It was absolutely foul with excrement and other filth, contained hardly any furniture, and no food. In this wretched state the poor children are stated to have lived for months, notwithstanding the fact that the family income from all sources must have exceeded £1 per week. As may be guessed, the source of all this misery was drink, the mother being hopelessly intemperate and the father either careless or equally hopeless of effecting any change for the better. In this case the operation of the Cruelty Prevention Act was seen to advantage. Under its provisions the children were immediately removed to the keeping of more careful hands, and both parents were convicted and sentenced. In the circumstances every reasonable person must approve the statement made by the presiding magistrate, that here was an instance of wilful neglect, in which, with an income which ought to have sufficed for ordinary means of sustenance, a family of children had been forced to subsist in a state of mere savagery. The sentence of two months pronounced upon the mother certainly does not err on the side of severity. As regards the male parent, whose offence was mainly that of trusting to his utterly incapable partner, a lighter penalty

was not unnaturally held to be sufficient. The authorities will doubtless be careful that, after this, neither is allowed to resume the ruinous exercise of quasi-parental "duty."

CHOLERA SCARES.

WE must not be too hard on certain of our daily contemporaries in this dull season, when everybody is out of town and Parliament is not sitting, but if they could avoid the subject of cholera it would certainly be well for the community and might not be bad for their own interests. At this season acute gastric and intestinal storms will occur, in spite of, and perhaps largely because of, great atmospheric variations, with the earth temperature about 56° Fahr., that mysterious figure, at which Dr. Ballard has shown such cases may be expected, even in the best regulated communities. But they do not constitute cholera and are not importations from Asia. The man whose case supplied our contemporaries last week with material is convalescent, and the case of the child of five years, *alias* "the nurse," as some papers had it, of the Poplar Hospital, was entirely unrelated to his. It was, in fact, a case of acute gastro-intestinal or dysenteric catarrh, aggravated by errors of diet, in a tuberculous child. Mr. Frank Corner informs us of the fact that the pleural surface of the diaphragm was studded with tubercle. And we ourselves saw one of the motions, which consisted of blood and mucus—was, in fact, dysenteric rather than choleraic. Yet these two cases were made to do "scare" duty and scare mischief, and to make many nervous people very unhappy. One of these days our contemporaries may have the real "wolf" to "cry," and then they may not be heeded if every severe case of English cholera is made to do sensational duty.

THE Sydney *Evening News* states that at a meeting of the Charities Commissioners, held at Melbourne on the 18th ult., Drs. Girdlestone, Grant, and Webb, in their evidence, condemned the Melbourne Hospital, root and branch, as a hotbed of disease. The last witness stated that five house surgeons had died of phthisis, contracted in the hospital through the insanitary condition of their quarters. All the witnesses concurred in the urgent necessity for the erection of a new building.

THE sudden death, on the 27th inst., of Mr. Carnelley, Professor of Chemistry in the University of Aberdeen, is announced. In 1879 he was elected to the Professorship of Chemistry in Firth College, Sheffield; in 1882 to the chair of Chemistry at University College, Dundee; and in 1888 to the Chemistry chair in Aberdeen.

THE British warship *Buzzard*, which recently arrived at Halifax from Jamaica, is reported to have had nineteen cases of yellow fever on board. The report adds that one man died on the voyage, and was buried at Port Royal. Five of the men, it is expected, will recover.

SEVERAL cases of leprosy have, it is reported, been discovered in Englishtown, Cape Breton Island. The victims are said to have been in constant association with the other inhabitants.

THERE would appear to be a recrudescence of influenza in Vienna. Several cases are stated to have occurred in the hospitals there. In Paris also the disease is said to be reappearing.

DR. LLOYD ROBERTS performed Porro's operation at St. Mary's Hospital, Manchester, on Thursday, the 21st instant, in a case of extremely contracted pelvis. Both mother and child are making favourable progress towards recovery.

THE SANITARY CONGRESS AT BRIGHTON.

THE twelfth annual Congress of the Sanitary Institute of Great Britain was held this week at Brighton, under the presidency of Sir Thomas Crawford, K.C.B., M.D. The members of the Congress were received at the Royal Pavilion, the place of meeting of the Congress, by the Mayor of Brighton (Alderman Manwaring), Sir T. Crawford, and Sir Douglas Galton, K.C.B., chairman of the Council. At the luncheon which followed the reception the Mayor, in proposing the toast "The Sanitary Institute," said that it was of the utmost importance that the doctrines which it put forward should be made widely known, and be carried out in as perfect a manner as possible. Sir Douglas Galton responded.

The company subsequently adjourned to another part of the Pavilion, where the Mayor formally opened the Health Exhibition, which is being held in connexion with the Congress, consisting of all kinds of appliances for the better preservation of health.

In the evening the formal opening of the Congress took place in the Music Room, when Sir Thomas Crawford delivered his presidential address. He strongly urged that the laws governing the origin and spread of preventable disease are not merely physical, but also moral. The more common diseases spread mainly by human intercourse, and not infrequently they would find mothers visiting such cases merely out of curiosity. Danger to the individual should never be permitted to stand in the way of the performance of an obvious duty, but all needful precautions should be taken to prevent the spread of contagion. He thought this was a sphere in which the clergy might exercise great influence for good by making themselves well informed as to the nature of contagion and the most effective methods of preventing its spread. They were quite justified in maintaining that the violation of the moral law in such matters as temperance and chastity stood prominently forward as a fruitful source of disease. They must look to amendments in social laws for a remedy. Much had been done to amend the laws for the protection of public health, and if Bench and Bar would add their influence in simplifying procedure much would be gained. But lessons in personal and domestic hygiene must find a place in the curriculum of the elementary schools before they could hope for the realisation of all that was practicable in the prevention of sickness, and the consequent prolongation of life. Proceeding to deal with the reports of the Army Medical Department, he said that the loss to the army through sickness was equal to a force of 10,716 men, and to the very considerable sum of £557,232. Until there was a trustworthy record of sickness amongst civilians they must be satisfied with such approximate estimates as they might be able to obtain. On the authority of Sir James Paget the loss from sickness between the ages of fifteen and sixty-five in England and Wales amounted to 20,000,000 weeks' work in the year, or 2½ per cent. of the whole work done by persons between those ages. The records of the Army Medical Department showed that 23,571 out of 49,172 men offering themselves for enlistment were rejected. Making all possible allowances, these figures indicated grave defects in the rearing of the lower orders from whom the recruits are drawn. Referring to the researches of Flügge and others in the relationship of micro-organisms to disease, he pointed out that while there were micro-organisms whose agency was limited by the fact that the multiplication of infective material took place only under given conditions, and required the active intervention of the individual in whose person the contagium was multiplied to transmit it to others, others retained their vitality in the surroundings of the sick after they were given off from the body. The latter were therefore capable of transmission by various agencies, though the multiplication of the infecting material took place only on the body of the sick. Having pointed

out many causes of disease which might be prevented, the most important of which was overcrowding, he said that the best safeguards against disease-producing micro-organisms were pure air and water, the direct light of the sun, absolute cleanliness, and ample open spaces around buildings. In conclusion, he pointed to the statistics of sickness in the army medical records, to the reduction of the death-rate in London and Brighton, and expressed the belief that with the improved laws which were promised there was a fair prospect of seeing the mortality in towns reduced to 10 in 1000 before very many years passed.

A vote of thanks to the President for his address was moved by the Mayor and seconded by Mr. Baldwin Latham.

On Tuesday the Congress resumed its sitting, the day being devoted to papers and discussions in Section D—Sanitary Science and Preventive Medicine.

Dr. Vivian Poore, President of the Section, in his address on "The Living Earth," said that it was of great importance to sanitarians that they now possessed the knowledge that the upper stratum of the ground on which they lived was teeming with life. Saprophytes and their allies abounded everywhere. Organisms that flourished in the body ceased to multiply in the soil. Sanitation, he contended, was purely an agricultural question; and in the country, where every cottage had, or ought to have, its patch of garden, there ought to be no difficulty in the daily removal of refuse from the house without any risk of contaminating the water-supply. The panacea for all sanitary ills was still "drainage," which was only a means of fouling every natural source of pure water.

Sir Douglas Galton, in moving a vote of thanks to Dr. Poore for his address, contended that water was a great purifier. In towns in which drainage was established the health of the inhabitants was much better than in those places where removal by cartage was employed.

Mr. A. G. Henriques, in seconding the motion, thought that Dr. Poore had under-estimated the influence of the air in oxidising.

Mr. James Turton, chairman of the Sanitary Committee of the Brighton Town Council, then read a paper on some points in relation to Septic and Infectious Disease. He said that insanitary conditions which lead to the contamination with organic matter of air, food, or drink might be the cause of disease, or be the means of conveying the germs derived from pre-existing cases of disease; and the common symptoms of such diseases might be regarded as the efforts of nature to eliminate the poison. He mentioned a case in which septic poisoning was caused by the rotting of some joists which supported the flooring of a kitchen, and from this he concluded that all collections of putrescent organisms were capable of producing symptoms of septic poisoning.

Dr. J. Ewart read a paper on the Sanitary Advance of Brighton, and, after some discussion, a resolution was carried, on the motion of Mr. A. J. Henriques, recommending to the Council of the Institute the expediency of introducing and promoting a Bill in Parliament making landlords and owners liable for all sanitary improvements in dwelling-houses.

Dr. A. T. Schofield read a paper on the Value of Hygienic Knowledge to Women, in which he recommended the instruction of women in the principles of hygiene.

Professor Corfield read a paper on House Sanitation from a Householder's Point of View.

In the evening Mr. W. H. Preece lectured on the Sanitary Aspects of Electric Lighting. He argued that all sources of illumination which necessitated the absorption of oxygen were injurious to health. Lighting by means of electricity, however, was entirely free from such objections. He thought that the same authority which regulated the sanitation of dwellings should also control the purity of the air they breathed and the light they worked by.

On Wednesday, in Section 1, Dr. Arthur Newsholme read a paper on the Bearing of School Attendance upon the Spread of Infectious Disease. He did not think that the spread of infectious disease through school attendance was so great as it was generally supposed to be. He strongly condemned the practice of schoolmasters sending children to look after absentees. Measles and whooping-cough should, he thought, be added to the diseases of which notification was required under the Act of Parliament.—In the discussion which followed the reading of the paper it was generally thought that measles should be included in the list of diseases affected by the Act of Parliament referred to in the paper.

The Hon. F. A. R. Russell read a paper on a National Health Service. Infectious diseases, he said, arising from well-known causes could be greatly reduced by the general application of principles already well understood. A neglected village might be the means through ordinary business intercourse of distinctive epidemics in neighbouring towns. For the proper administration of Health Acts he thought a Ministry of Health should be instituted, which should have under it county boards and health officers.—Dr. Alfred Carpenter was of opinion that much good might be effected if the salaries of officers of health were sufficiently increased to attract medical men of high standing, and to enable them to devote themselves entirely to the duties of such appointments.

In Section 2, Professor T. R. Smith delivered his address, as President of the Section, on Baths. The Baths and Washhouses Act had not, in his opinion, gone far enough, for the prices charged at public baths were scarcely within the reach of working people. He thought that if simple, cheap, and accessible bathing establishments were formed in crowded neighbourhoods they would become popular.

Sir Thomas Crawford, in moving a vote of thanks to Professor Smith for his address, called attention to the great want in seaside towns of tepid sea-water baths for the convenience of invalids at moderate charges.

After papers had been read by Mr. W. H. Hallett, J.P., on the Brighton Waterworks; Mr. T. J. May on Brighton as a Health Resort; and Mr. R. E. Middleton on Waterworks Regulations, the Congress adjourned till Thursday.

AMENDMENT OF THE FRENCH CONTAGIOUS DISEASES ACT BY THE PARIS MUNICIPALITY.

M. RICHARD'S report on the working of the Contagious Diseases Act in Paris, which we have analysed at some length, gave rise to a lengthy debate in the Paris Municipal Council. This discussion lasted four days, and is full of interest for those who study this most delicate, difficult, but important subject. As usual, the principal contention was between the members of the Municipality and the representative of the national or central authority—namely, the Prefect of Police, M. Loze. Fortunately, on this question the Prefect showed himself very desirous to adopt any proposal so long as it did not lessen the efficacy of the protective measures taken. He readily admitted that it was not right to send women to the St. Lazare Prison. He recognised that the food given in this prison was insufficient, and that the women did not deserve the harsh treatment they received. The Prefect of Police proposed a counter-project of reform, which only differed in some points from that drawn up by M. Richard. The police authority showed a disposition to treat the matter merely as a question of public health, and to relinquish the draconian powers of persecution which caused so much terror and suffering among the women, without in any way contributing to reduce the prevalence of disease.

The principal bone of contention was the question of minors. No one challenged the statistics given establishing that by far the greater number of cases of syphilis were propagated by minors. Of all women, they are by far the most dangerous. Nevertheless, it was strongly felt that it was not right to inscribe as a prostitute a girl under the age of twenty-one. Before she was allowed to give herself up to such a life and her position as a prostitute became legalised, she should have reached her majority. If her parents, as is often the case, drove her on to the streets, if for this or other causes she could not be made to lead a respectable life, then such person should be treated as a child "morally abandoned" and sent to a technical school, and there taught a trade till she had reached her twenty-first year. The Prefect of Police accepted this in principle, but declared that he would still continue registering girls as prostitutes who were not of age, though more

than sixteen years old, till such time as the existing law on the "morally abandoned" was extended so as to apply to prostitutes under the age of twenty-one. On the other side, M. Lyon-Allemand urged that to give the police the power of imprisoning young women in technical schools might lead to grave abuses. It would be a convenient way by which parents could get rid of young girls their sons had seduced. Also, as girls could marry before they were twenty-one, it was difficult to say they should not be prostitutes before that age. Nevertheless it was agreed that a minor could be arrested for repeated acts of solicitation in the streets. If on medical examination she was found to be ill, then she should be sent to a special hospital where she would not mix with regular prostitutes. If the girl was not ill, or had been cured, applications would be made to friends and parents to take charge of her, and see that she did not resort to the streets again. Should this fail, then a commission would investigate the matter, and, on finding the case to be hopeless, condemn the young woman to be treated as a child morally abandoned, and therefore confined in a technical school till she was of age. This technical school is not to have in any way the character of a penitentiary, but it was generally understood that every effort would be made to reform its inmates, both physically and morally.

When a woman is of age and is convicted of habitually soliciting, she is to be registered, must submit to medical examination at least once a week, and, when contaminated, must within twenty-four hours enter a special hospital and remain there till perfectly cured. If she fails to surrender herself for treatment, she will be arrested and sent as a punishment to the prison infirmary of St. Lazare. It was very emphatically stipulated that these special hospitals should be managed in the same manner as ordinary hospitals. The women were to be well and kindly treated, so that the hospital should inspire no terror, and the women would therefore no longer have cause to fear the possible consequence of medical examinations.

M. Charles Longuet made an energetic attack on licensed houses. Women were enticed by all manner of false representations to enter these houses, and when once they had taken this fatal step became slaves of the worst description. The proprietors sold them on credit articles of clothing and kept them prisoners on the pretext that they owed money. The Prefect of Police denied that this was the case. The women could leave such houses whenever they chose, and there was a special regulation by which money claims did not hold good. To prevent the enslavement of the women, a licensed-house keeper who gave credit to the women could not prosecute for payment. Consequently the women were free to leave such houses whenever they chose. M. Richard had quoted statistics to show that, in 1887, the proportion of women contaminated in these houses was equal to 25·48 per cent.; in 1888 to 25 per cent.; while for these two years the proportion of women registered who were found to be ill but did not live in these licensed houses was only 12·31 per cent. and 9·45 per cent. These figures, the Prefect of Police admitted, were correct, but they did not prove disease was more prevalent in licensed houses. It showed that women who were not confined in these houses only came up for examination when they believed they were in good health. Dr. Commenge, one of the medical examiners of public women, had drawn up statistics extending over a period of ten years which were much more conclusive. These were based, not on the number of women, but on the number of medical examinations. According to these statistics, out of 305,799 examinations of registered women who lived in their own lodgings there were 3·12 cases of syphilis per 1000, and 3·05 cases of other venereal diseases. Out of 503,712 examinations of women living in licensed houses there were 2·70 cases of syphilis and 2·52 of other venereal diseases per 1000. Thus, even among those women who came up for examination, the proportion of disease was greater than among those who lived in licensed houses. To this must be added 76,740 examinations of women who were arrested because they had failed to report themselves, and these gave a proportion of 23·96 cases of syphilis, and 14·46 of other venereal diseases per 1000. Finally, out of 27,041 examinations of clandestine prostitutes—women and girls who were not registered—the cases of syphilis amounted to 166, of other diseases to 134, per 1000. The Council thereupon voted, by thirty-seven against twenty-five, that licensed houses should not be abolished. These establishments, however, seem to be dying a natural death. There were 142 of them in Paris in 1872, ten years later 117, and last year only 66 remained. The Prefect of Police complained that in their place a number of hotels had sprung up where the police had no right of entry, no power of control, and where abominations were enacted which could never happen in licensed houses.

A number of other clauses were carried by large majorities, and these, taken altogether, constituted a very complete project of reform. When, however, this project which had been adopted in detail was put altogether, some members who had voted for every clause separately voted against the Bill as a whole. Thus the entire measure, the result of M. Richard's able report, and of four days' arduous debate, was thrown out. Great indignation was felt at so unexpected and miserable a climax. The idea that St. Lazare and all its horrors would remain as in the past struck the Municipal Council with a sense of remorse. Hastily the Councillors went to work to pick up some fragments of the lost measure and pass them separately. These latter only remain as legislative enactments, and to be put a vote of urgency had to be passed. Then the Council decided, without opposition, that: "A sanitary asylum shall be opened to which women who are found by the Municipal Dispensary to be ill shall be sent. This asylum cannot in any way, either by its position or its *régime*, be assimilated with the prison of St. Lazare, or any other penitentiary establishment." Then the following was carried, also without division: "The Council is of opinion that it is necessary to institute for girls who are minors and are found in a state of immoral vagabondage, and who are natives of the department of the Seine, a special establishment which shall be connected with the service of the morally abandoned. A special infirmary might be annexed to receive girls who are minors, who usually give themselves up to prostitution, and who are found to be suffering from venereal disease." Finally, the Council carried unanimously a resolution thus worded: "The Council, considering that *souteneurs* are the principal purveyors of prostitutes, that the individuals who resort to this ignoble occupation escape all repression, the law being insufficient and the magistrates and police displaying an inexplicable laxity in their interpretation of the law, expresses the hope that to live on the prostitution of others will be considered as an offence to be severely repressed." This last resolution has been the most welcomed by public opinion and the Parisian press. The *souteneur* is the scourge and the scandal of Paris life, and as his existence is in part due to the Contagious Diseases Act, his tolerance is much resented by the advocates of Legislature on such subjects. While, however, prostitution is hedged in by all manner of police regulations, women, especially young inexperienced girls, will place themselves under the supposed protection of rogues and scoundrels who speculate on their helplessness. These wretches will, of course, do their best to prevent such women submitting to medical examination, as their protection would then no longer be necessary. Therefore, the *souteneur* contributes to hinder that sanitary control which has been proved so efficacious in preventing the spread of disease. With the abolition of St. Lazare a great step has been taken to reconcile the women to the necessity of medical examination, and, notwithstanding the abortive result of the debate so far as M. Richard's project as a whole is concerned, still the Municipal Council of Paris is to be congratulated on having proclaimed three very important principles. First, the humane treatment of diseased prostitutes in special hospitals, and the abolition of the St. Lazare prison; secondly, the treatment of prostitutes who are minors as children morally abandoned; and thirdly, the demand for the severe punishment of the *souteneur*.

DEATHS FROM STARVATION.—An official return, just issued, shows that twenty-seven deaths occurred in the metropolitan district in 1889 upon which a coroner's jury returned a verdict of death from starvation, or death accelerated by want.

HACKNEY MARSH.—A draft scheme has been prepared by the Government for the conversion of Hackney Marsh into a recreation ground. It is proposed that the Marsh be placed under the management of the London County Council, who will receive the powers necessary to preserve the plants &c., and beautify the Marsh.

THE FRENCH EXHIBITION AT EARL'S COURT.

IT must at once be confessed that the French Exhibition does not come up to our expectations. It falls short of both the American and the Italian Exhibitions which were held on the same grounds. As France is so near a neighbour and united to us by so many friendly ties, it was only natural to expect that the French would be the best of the entire series of foreign exhibitions organised in London. Perhaps the French are exhausted by their unparalleled efforts of last year, and, after the success achieved on the Champ de Mars, thought that nothing more remained to be done. Whatever may be the cause, the result is disappointing to those who expected to find at Earl's Court some of the marvels and something of the splendour that rendered the Paris Exhibition of 1889 the grandest and most successful of exhibitions ever held. There are at Earl's Court some good pictures, notably those from this year's Salon, some furniture, some bronzes worth a visit, and a great many trinkets that are not in keeping with the dignity of a national exhibition.

From our own technical point of view there should have been many objects of interest had there been anything like a concourse of exhibitors in each particular branch; but some of the most important subjects are represented by only one exhibitor. For instance, we only discovered one wholesale chemist, Messrs. Adrian and Cie. of Paris, whose exhibits we noticed at the Universal Exhibition of 1889. Among other useful articles, they show specimens of hæmoglobin produced by the Deschiens process, beefsteak powders, and Turkey pepsine. There are besides this many chemicals, such as terpine &c. Messrs. Brigonnet and Naville are also manufacturing chemists, but their exhibits are restricted mainly to chemicals derived from coal tar. M. Desnoix, who is *hors concours*, exhibits a great variety of antiseptic dressing—cotton, gauze, linen, &c.—with thymol, salol, sublimate, &c.

In the midst of the various furniture exhibits the firm of A. E. Eliaers shows a great variety of couches and rolling chairs for invalids. We tried several of the latter and found them very light, easy to move and to steer. A speculum armchair that, unless prepared for use, looks like an ordinary armchair, is exhibited. It seems fairly convenient and not expensive.

Perhaps in an exhibition such as that held at Earl's Court numerous technical objects would fail to interest the class of people expected to visit this resort. Yet we cannot but remember the very great interest and success of the wonderful display made of Italian wines and Italian oils. French wines and French food-supply generally would interest the English public quite as much as similar products from Italy. The subject also is one that intimately concerns the interests of public health. There are certainly some exhibits of French wine, and there is a buffet where samples may be tasted, but it is a poor display when compared with what was shown at the Italian Exhibition. Still, we can in any case commend the courage of the Brasseries de la Méditerranée, who have ventured to compete with beer brewed at Lyons and Marseilles against the renowned ales of England and the lager of Bavaria. We were less surprised to find that the Chocolat Menier had a stall at the Exhibition, for this wholesome and nutritious delicacy has a long-established reputation in England. The same may be said of such exhibits as L. Chevrier's French coffee-making apparatus, and Prudon and Dubost's apparatus for making aerated waters. We might, perhaps, have had occasion to describe other exhibits had we been more successful in our efforts to see the exhibitors who could give technical explanations. The attendants at the stalls seek to sell, but are altogether unable to instruct the visitor who has an inquiring turn of mind. This defect, common to most exhibitions, is especially noticeable in the present instance. For example, Messrs. J. Carré et Fils Aîné et Cie.'s method of filtering and raising water in dwellings seems a useful invention, especially for country districts where there are no public waterworks. This process was awarded a gold medal last year in Paris, but at the Exhibition there are no means of really examining the merits or defects of these water-raisers. Close by, the celebrated St. Gobain glass-works display excellent glass flooring and roofings, consisting of some of the very best material that can be used for urinals and sanitary purposes. Perhaps, from a medical point of view, the most interesting subject at the Exhibition is the practical precaution taken to meet the very serious risk of accidents at the Wild East show. Four medical men take it in turns to be in constant attendance; for, what with the horse-racing and the sham fights, mishaps cannot be avoided. On one occasion, for instance, a horse fell and threw the *vivandière* head foremost among some rocks. She was borne away senseless, but had fortunately been saved from serious injury by her very plentiful mass of hair coiled on the back of her head. A rider on another day broke his leg. The eyes of the performers also are exposed to slight accidents from the mud that is thrown up by the horses when the weather is wet. Mr. Maitland Coffin, one of the medical officers, courteously conducted us behind the scenes, and here, immediately on the other side of the main entrance door, a complete ambulance is kept in readiness during every performance. The ambulance car is the same as that used by the St. John Ambulance Corps. Very strict orders are given in the event of any accident that no one shall be allowed to enter save the bearers; thus all confusion is carefully avoided. When the wounds are dressed, the injured person is conveyed to the sleeping quarters of the Arabs. Here are two rooms, one for women and one for men, reserved exclusively as hospital or ambulance wards. The furniture is of the simplest, and the ventilation amply provided for; but more care might be taken in the washing and the scrubbing of the boards. The same may be said of the dormitories where the Arabs sleep.

We must congratulate the management in having abandoned the hope of providing English closets for the Arabs. The closets are made of cement throughout, the floor cleansed by a constant flow of water, and there is no seat that can be fouled. There was a complete absence of unpleasantness, and this Continental method is much more practical when dealing with persons who are not accustomed to English waterclosets. The physique of the Arabs who are lodged has been justly much admired. Their skill in horsemanship stimulates the love of healthy exercise, and thus the Wild East show may be considered as an entertainment that will benefit, indirectly at least, the health of the public. Nevertheless, and in spite of these considerations, though we can recommend a visit to the French Exhibition on general grounds, we cannot say that, professionally, there is anything particular to be learnt or seen.

BRITISH DENTAL ASSOCIATION.

THE large attendance of members of this Association and visitors at Exeter last week showed the popularity of this annual scientific and social gathering. The adequate enforcement of new Parliamentary decrees is always at first expensive, and the Dentists Act is no exception. Thus the treasurer, Mr. Canton, while speaking favourably of the financial position of the Association, hinted that further costly litigation might be forced upon them. The president, Mr. Browne-Mason, in his address referred to the honour of following such men as Sir John Tomes, Spence Bate, Sir Edwin Saunders, and the veteran Corbett. He approved the alterations made in the dental curriculum of the Royal College of Surgeons of England, and took up the question of the relation of dentistry to the public services, and, referring to the able work done by Messrs. Fisher and Cunningham in this direction, he urged the desirability of the appointment of dentists to military and naval hospitals. He noticed that in both services many recruits were rejected under certain rules about teeth, which rules were in some instances difficult of comprehension; and, further, he considered that attention to the teeth of our defenders was called for on grounds of economy, duty, and humanity. Mr. Morton Smale, the hon. secretary, congratulated the Society upon its steady increase in numbers, and stated that the committee appointed to collect information about children's teeth in schools and reformatories and such places where large numbers of children live together, had been pursuing the in-

vestigation, and would report the results. Papers were read by Mr. J. C. Oliver on Conservative Dentistry, by Mr. G. G. Campion on the need of a Higher Qualification in Dental Surgery, by Mr. S. C. Coxon on the Teaching of Mechanical Dentistry, by Mr. T. G. Read on Porcelain and Gold Crown, and by Mr. H. W. Mayne on Draining Tube for the Antrum." A discussion then followed with reference to the vexed question of the utility of bar and bridge work. Mr. Tom Bird and Dr. Dudley Buxton read papers on Anæsthetics. Demonstrations of various methods of operating (clinics) were especially numerous, amongst which must be mentioned Dr. Hewitt's anæsthetising with nitrous oxide and oxygen, using his improved apparatus.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns 5649 births and 3907 deaths were registered during the week ending Aug. 23rd. The annual rate of mortality in these towns, which had been 19·2 and 21·0 per 1000 in the preceding two weeks, was again 21·0 last week. The rate was 19·2 in London and 22·4 in the twenty-seven provincial towns. During the first eight weeks of the current quarter the death-rate in the twenty-eight towns averaged 18·9 per 1000, and was 1·5 below the mean rate in the corresponding periods of the ten years 1880–89. The lowest rates in these towns last week were 13·0 in Bristol, 14·4 in Birkenhead, and 15·3 in Nottingham and in Halifax. The rates in the other towns ranged upwards to 27·5 in Salford, 27·6 in Sheffield, 29·4 in Newcastle-upon-Tyne, and 31·7 in Preston. The deaths referred to the principal zymotic diseases, which had increased in the preceding five weeks from 526 to 960, further rose last week to 999; they included 705 from diarrhœa, 106 from measles, 72 from whooping-cough, 56 from scarlet fever, 36 from diphtheria, 24 from "fever" (principally enteric), and not one from small-pox. The lowest death-rates from these diseases were recorded in Halifax, Blackburn, Bristol, and Oldham, and the highest rates in Salford, Birmingham, Norwich, and Preston. The greatest mortality from measles occurred in Birkenhead and Bradford; from scarlet fever in Huddersfield, Manchester, and Bolton; from whooping-cough in Norwich and Huddersfield; and from diarrhœa in Hull, Sheffield, Norwich, Birmingham, and Preston. The mortality from "fever" showed no marked excess in any of the twenty-eight towns. The 36 deaths from diphtheria included 20 in London, 6 in Salford, 3 in Liverpool, 2 in Manchester, and 2 in Birmingham. No death from small-pox was registered in any of the twenty-eight towns. One small-pox patient was under treatment in the Metropolitan Asylum Hospitals and one in the Highgate Small-pox Hospital. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of last week was 1427, against numbers declining from 1505 and 1457 on the preceding three Saturdays; the new cases admitted during the week were 148, against 118 and 125 in the previous two weeks. The deaths referred to diseases of the respiratory organs in London, which had been 197 and 208 in the preceding two weeks, were 203 last week, and exceeded the corrected average by 27. The causes of 86, or 2·2 per cent., of the deaths in the twenty-eight towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Wolverhampton, Nottingham, Leeds, and in four other smaller towns. The largest proportions of uncertified deaths were recorded in Liverpool, Hull, Cardiff, Huddersfield, and Blackburn.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 17·2 and 18·2 per 1000 in the preceding two weeks, further rose to 18·9 in the week ending Aug. 23rd, but was 2·1 below the rate that prevailed during the same period in the twenty-eight English towns. The rates in the eight Scotch towns ranged from 14·4 in Greenock and 15·6 in Aberdeen, to 20·9 in Glasgow and 21·2 in Leith. The 488 deaths in the eight towns showed an increase of 18 upon the number in the preceding week, and included 40 which were referred to diarrhœa, 27 to whooping-cough, 10 to measles, 6 to scarlet fever, 4 to diphtheria, 3 to "fever," and not one to small-pox. In all, 90 deaths resulted from these principal zymotic diseases, against 67 and 73 in the preceding two weeks. These deaths were equal to an annual rate of 3·5 per 1000, which was 1·9 below the mean rate last week from the same diseases in the twenty-eight English towns. The highest death-rates from these diseases were 4·6 in Leith and 7·8 in Perth. The fatal cases of diarrhœa, which had been 18 and 36 in the previous two weeks, further rose last week to 40, of which 15 occurred in Glasgow, 9 in Dundee, and 6 in Edinburgh. The deaths referred to whooping-cough, which had declined from 36 to 20 in the preceding three weeks, rose again last week to 27, and included 10 in Glasgow and 7 in Edinburgh. The 10 fatal cases of measles exceeded by 6 the number in each of the previous weeks, and included 3 in Perth. The 6 deaths from scarlet fever also exceeded recent weekly numbers; 4 occurred in Edinburgh. Of the 4 fatal cases of diphtheria, 2 were recorded in Glasgow and 2 in Edinburgh. The deaths referred to diseases of the respiratory organs in these towns, which had been 64 and 67 in the preceding two weeks, further rose last week to 81, and exceeded the number in the corresponding week of last year by 33. The causes of 49, or 10 per cent., of the deaths in the eight towns were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 18·6 and 20·1 per 1000 in the preceding two weeks, further rose to 20·5 during the week ending Aug. 23rd. During the first eight weeks of the current quarter the death-rate in the city averaged 20·3 per 1000, the rate for the same period being 18·5 in London and 17·1 in Edinburgh. The 139 deaths in Dublin showed an increase of 3 upon the number in the previous week; they included 7 which were referred to diarrhœa, 4 to "fever," 2 to measles, 1 to whooping-cough, and not one either to small-pox, scarlet fever, or diphtheria. Thus the deaths from the principal zymotic diseases, which had been 14 in each of the preceding two weeks, were again 14 last week; they were equal to an annual rate of 2·1 per 1000, the rate from the same diseases being 4·9 in London and 3·8 in Edinburgh. The fatal cases of diarrhœa, which had been 8 in each of the previous two weeks, declined to 7 last week. The deaths referred to different forms of "fever," which had been 2 in each of the preceding three weeks, rose to 4 last week. The 139 deaths in Dublin included 32 of infants under one year of age, and 33 of persons aged upwards of sixty years; the deaths of infants corresponded with the number in the previous week, while those of elderly persons showed an increase. Five inquest cases and 3 deaths from violence were registered; and 48, or more than a third, of the deaths occurred in public institutions. The causes of 21, or more than 15 per cent., of the deaths in the city were not certified.

THE SERVICES.

ARMY MEDICAL STAFF.—Surgeon Charles Stuart Spong, F.R.C.S., has been seconded for service with the Egyptian Army (dated Aug. 13th, 1890).

ADMIRALTY. — The following appointments have been made:—Fleet Surgeons: Alfred W. Whitley to the *Trincomalee*, Valentine Duke, B.A., M.B., to the *Castor*, George B. Murray to the *Unicorn*, and Henry S. Lauder to the *Clyde* (all dated Aug. 30th, 1890); John S. Dobbyn to the *President*, additional (dated Aug. 27th, 1890). Staff Surgeons: Christopher Harvey to the *Anson*, Henry T. Madders, M.D., to the *Lion*, Henry A. W. Richardson to the *Hecla*, Robt. W. Biddulph, B.A., M.B., to the *Cleopatra*, and Frederick A. Trevan to the *Indus* (all dated Aug. 30th, 1890); Myles O'C. M. Swiney to Ascension Hospital and James O'B. Williams to the *Comus* (both dated Aug. 21st, 1890). Surgeons: John Lowney to the *Assistance*, temporarily (dated Aug. 30th, 1890); Robt. M'Ivor, M.D., to the *Daphne* (dated Sept. 5th, 1890).

VOLUNTEER CORPS.—*Rifle:* 4th Volunteer Battalion, the Queen's (Royal West Surrey Regiment): Thomas Lyndon, M.D., to be Acting Surgeon (dated Aug. 27th, 1890).—6th Volunteer Battalion, the King's (Liverpool Regiment):

Acting Surgeon J. W. Ellis to be Surgeon (dated Aug. 27th, 1890).—3rd Volunteer Battalion, South Staffordshire Regiment: Acting Surgeon V. J. Magrane to be Surgeon (dated Aug. 27th, 1890); Acting Surgeon F. W. D. Fraser, M.D., resigns his appointment (dated Aug. 27th, 1890).—6th Fife-shire Volunteer Battalion, the Black Watch (Royal Highlanders): Acting Surgeon W. Stuart Palm, M.B., to be Surgeon (dated Aug. 27th, 1890).—2nd Volunteer Battalion, the Gloucestershire Regiment: Acting Surgeon A. A. Hogarth, M.B., to be Surgeon (dated Aug. 27th, 1890).—3rd Volunteer Battalion, the Northumberland Fusiliers: Acting Surgeon W. C. Beatley, M.D., to be Surgeon (dated Aug. 23rd, 1890).—2nd Volunteer Battalion, the Royal Welsh Fusiliers: Acting Surgeon T. E. Jones to be Surgeon (dated Aug. 23rd, 1890).—1st Volunteer Battalion, the Duke of Wellington's (West Riding Regiment): Acting Surgeon E. Ellis is appointed Second Lieutenant (dated Aug. 23rd, 1890).—2nd Volunteer Battalion, the Queen's Own (Royal West Kent Regiment): Edmund Frederick Bindloss, Gent., to be Acting Surgeon (dated Aug. 23rd, 1890); Surgeon C. C. Greig is granted the rank of Surgeon-Major, ranking as Major (dated Aug. 23rd, 1890).

VOLUNTEER MEDICAL STAFF CORPS.—The London Division: Surgeon P. H. Whiston resigns his commission (dated Aug. 23rd, 1890).

Correspondence.

"Audi alteram partem."

SMALL-POX AND COW-POX.

To the Editors of THE LANCET.

SIRS,—Absence from home has hitherto prevented my replying to the remarks you kindly made on a paper I read on "Variola in Man and Animals," which appeared in THE LANCET of the 2nd inst. (page 240), and in which you suggest that it would be well for me to supply the precise authority for the statement made as to the serious consequences resulting when medical men, desirous of obtaining lymph for vaccination purposes, have inoculated cows with small-pox matter, and from the spurious vesicles produced have vaccinated people, and thereby caused widespread outbreaks of variola. I much regret that I cannot at this moment lay my hands upon the notes I made as to such occurrences in India (I think there were two of these, one of a very alarming character); but possibly my friend, Surgeon-Major Pringle, who has had great experience in vaccination in India, will remember them. At any rate, should my notes be found I will ask you to allow me to return to the subject again. In the meantime I may refer to the *Medical Times and Gazette* of July 2nd, 1881, in which there is the following passage:—"The disastrous results of mediate variolation, instead of vaccination, in America and India, show the value of a knowledge of the diseases of domestic animals." So far as the United States of America are concerned, I may allude to the reference made in the *Boston Medical Journal* of 1860 to the unfortunate result which marked the attempt of Dr. Martin to obtain vaccine lymph by inoculating a cow with small-pox virus. He imagined he had produced cow-pox on the animal's udder, and collecting what he believed to be vaccine lymph from the vesicles, he vaccinated about fifty children with it. A grave outbreak of small-pox followed, during which several patients died. In the *Chicago Medical Journal and Examiner* of October, 1881, Dr. Wood relates how, during an epidemic of small-pox immediately after the war in 1866, being urgently in need of vaccine lymph, he tried to obtain it by inoculating cows with small-pox matter according to the descriptions given by Ceely, Thiele, and Sonderland, but, he says, "the failure was complete, in my opinion. It happened, though, that during the progress of the experiments an army medical inspector, whose name I forget, was making a tour of the hospitals, and hearing of my experiments visited my hospital. After examination he pronounced the small vesicles (on the cow) genuine cow-pox, and confirmed his faith in his opinion by making some inoculations on the arms of two children in an Irish family near by. The inoculation resulted in a genuine small-pox, which went through the family in various grades of intensity."

A similar result was reported by the French Commission on Vaccination, and Mr. Ceely himself records an instance of small-pox occurring in a person whom he had vaccinated with supposed vaccine lymph obtained by the variolation of a cow. A list of the published failures to produce vaccine lymph from small-pox matter would occupy too much of your valuable space, though it would amply support my contention that such transmutation is not possible. In 1866, when the cattle plague was raging in this country, and medical men imagined it was cow-pox, I tried inoculation with small-pox virus upon a number of cattle, and, though the experiments were carefully conducted, cow-pox could not be produced. When it is shown that cow-pox will occasion small-pox, then I will believe in the converse. At present I challenge proof, and the onus rests upon those who assert that cow-pox is only small-pox transferred to the cow. There need be no more reference to Badcock and Ceely; for if the two conditions are one and the same virus, the fact should be capable of demonstration in some way or other. I venture to assert that this demonstration cannot be given, and that it is high time we had done with the fiction, which is not only misleading and contrary to our present knowledge of pathological processes, but is, as I have indicated, fraught with mischief.

I observe that in an editorial article in THE LANCET of the 9th inst., on the report of the Vaccination Commission (page 285), it is mentioned that, in view of the ignorance prevailing amongst veterinarians and others "as to the diseases which are associated with eruptions on the teats and udders of cows and calves, and which go by the general name of 'cow-pox'" &c. I am not aware that this charge of ignorance on the part of the veterinary profession can be substantiated. I think the eruptions on the mammary region of bovines, and which simulate cow-pox, are well known to us. At any rate, in my work on "Veterinary Sanitary Science and Police," published several years ago, in the section devoted to the variolous diseases of the domesticated animals I enumerated all these eruptions, and I am not aware that there is any ignorance or mystery pertaining to the subject, unless it may be in the minds of those unacquainted with veterinary medicine or its literature. The charge of ignorance is one that should not be lightly made against students of animal pathology nowadays by those who have only made the diseases of mankind their study.

I am, Sirs, yours very obediently,

Aug. 25th. GEORGE FLEMING.

VOYAGING FOR HEALTH.

To the Editors of THE LANCET.

SIRS,—Like others of your readers, I have followed with no little interest the communications which have appeared in your columns during the past week or two on the subject of sea voyaging—a subject which, as it seems to me, deserves very much more attention than it has been wont to receive. Having spent the past four years at sea in the P. and O. Company's service, and having during that time had charge of several hundreds of invalids and health-seekers, I may perhaps be allowed to refer to one or two points which, it seems to me, have not been fully dealt with by your correspondents. First, as to the relative merits of sailing ships and steamships. This is hardly a question which can be discussed or settled in the abstract. Different ships and different routes will be suitable or unsuitable for different patients. A case of mental strain from overwork or worry, in an otherwise healthy subject, would doubtless be benefited by the protracted monotony of a voyage in a sailing ship; but to the large majority of patients a steamer of the modern type offers undoubted advantages, especially in the tropics. Not to speak of better attention, diet &c., let me refer to but three points—free supply of ice, electric lighting, and free ventilation, independent of wind and weather. To anyone who knows what a difference to health and comfort these make in tropical voyaging, the mere mention of them will be sufficient. Jarring motion and odour of oil need not be referred to, being things of the past. In any first-class steamship they are conspicuous by their absence.

Next, as to the patients likely to be benefited by ocean voyaging. I can cordially endorse all that has been said by your correspondents as to the incredible and culpable ignorance and carelessness displayed by many practitioners

who send patients to sea. The ignorance referred to is not so much ignorance of the disease or of the patient, as it is ignorance of the conditions to which they are subjecting him—ignorance of ships, routes, and seasons. It is impossible to hope for accuracy in results so long as a "sea voyage" is spoken of and prescribed in a loose, indefinite way, as if one voyage were much the same as another, or as if it mattered little when or where the patient went. It would be about as reasonable to order a dose of medicine or a health resort without specifying what the patient was to take, or to what part of the world he was to go. I have seen not one, but many lives practically sacrificed by carelessness and ignorance of this kind, and I fancy that there are very few men who have spent any length of time at sea who could not say the same thing.

One other point which has not been referred to by your correspondents, but which seems to me to be of paramount importance. The comfort and often the life of the patient at sea depends upon the skill and care of the "ship's doctor," who, besides other important duties, is responsible alone for the health of crew and passengers—perhaps 500 or 1000 souls. The responsible and often difficult duties of the ship's surgeon are rendered doubly difficult by a foolish prejudice, which still survives, against anyone whose lot it may be to practise at sea. In this, the last decade of the nineteenth century, it ought not to be necessary to state that the ship's surgeon is now no longer of the Bob Sawyer type, and yet the prejudice to which I refer exists, not only in the mind of the public, but even, and largely, amongst the profession, who rarely treat him as they would do a *confrère* ashore. Instead of being handed over by his previous medical attendant by letter, or, better still, at a personal interview, with some account of the case and the course of treatment pursued, how often does it happen that the unfortunate health-seeker is sent on board with "directions for the voyage," or even with medicine, the result being that at the end of a week or two he comes seeking advice, thoroughly disheartened and worse than when he left home, with medicine perhaps spoiled, and impossible instructions not carried out. I say nothing of the disregard of courtesy and neglect of medical ethics involved, but for the patient's sake alone it is high time this sort of thing should cease. The question is really an important one. Apart from sailing ships, there are now more than a thousand large steamers under the British flag, carrying surgeons and plying to all parts of the world. The number of invalids and others seeking health at sea is very large, and is rapidly increasing year by year; and it is high time that the important duties and responsibilities of the doctors on these ships should be recognised both by the steamship companies and by the public, and that they themselves should be treated as responsible professional men. In this connexion it would be well if in all announcements of date of sailing &c. the surgeon's name were given with that of the ship. To invalids or their advisers it is much more important to know who will be responsible for looking after their health on board than it is to know the name of the skipper of the ship. It would not be difficult to touch on many other important matters under so comprehensive a heading as "Voyaging for Health," but I feel that I have already trespassed unwarrantably on your space.

I am, Sirs, yours truly,

RANKINE DAWSON, M.A., M.D.

St. George's Club, Aug. 25th, 1890.

MORTALITY OF NURSES IN INFECTIOUS DISEASES.

To the Editors of THE LANCET.

SIRS,—Recent disclosures render reforms in the nursing world inevitable. One direction which such reforms might profitably take I would indicate in this letter. The sickness and mortality rate which prevails amongst nurses employed in hospitals for infectious diseases is considerable—might even, if authoritatively stated, seem startling in amount; and what prompts me to emphasise this fact is the belief that the contributory causes of this undue rate are in part preventable, and in such measure should no longer be permitted to exist. Within the limits of my own experience as medical officer to fever hospitals, I have had signal proof that the method on which the nurses are too commonly dealt with in the matter of their engagement and dismissal by the public bodies managing certain of these hospitals materially augments this rate of sickness and mortality. The year's work in a fever hospital is unequal in the demands it makes upon the nursing staff, varying with the amount of prevalent infectious disease. To meet the heavier work of the busier months a full staff of nurses will be engaged, and later, when the work falls lighter, reductions are made in this staff, which again must be recruited in the early autumn months. A constant engagement and dismissal is thus kept up, with no attempt to secure and retain the services of a permanent body of nurses. In two main directions this thing is wrong: first, in exposing to the contagion of dangerous infectious disease an unnecessarily large proportion of nurses; secondly, in the exhibition of stolid indifference to the welfare of the nursing profession, shown by a system so ill organised as to permit of throwing suddenly and unprovisionally out of employment numbers of trained, capable, and efficient workers. Minor points of objection are too numerous to refer to here, but the standard level of excellence in nursing can never be maintained under such conditions. I will be acquitted of contending that nurses should be retained to do nothing in empty hospitals, or that infectious sickness and death can in our present knowledge be definitely banished from their ranks; but I do most emphatically maintain that they should not be dealt with on the lines I have endeavoured to indicate. It is perfectly practicable for the managers of fever hospitals to secure permanently the services of a staff of nurses sufficiently large to meet the fullest requirements of their busiest seasons and to find means of employing their energies in slack times. I trust, Sirs, I shall have conveyed to the medical profession, through the medium of your columns, a sense that reform in this direction is desirable.

I am, Sirs, yours faithfully,

C. KNOX BOND,
L.R.C.P., M.R.C.S., D.P.H., Lond. & Eng.,
Resident Medical Officer, City of Liverpool Fever Hospital,
late Assistant Medical Officer M. A. B. South-Western
August 26th, 1890. Hospital.

ANÆSTHETICS AT FUTURE INTERNATIONAL CONGRESSES.

To the Editors of THE LANCET.

SIRS,—After the cordial welcome and profuse hospitalities extended to us at Berlin, it may appear ungracious to raise a complaint on a mere question of detail, but as I feel certain that the managers of future gatherings will be thankful for any hints which may assist them in their arduous undertaking, I may, perhaps, be permitted to draw attention to one point in which I think some improvement would be appreciated. I refer to the position of anæsthetics at these meetings. Those who are interested in this subject and attended the recent Congress at Berlin, will, I think, bear me out when I say that the arrangements made for the discussion of anæsthetic matters were totally inadequate and unsatisfactory. It appears to have been recognised from the first that the subject was likely to prove of interest, and hence it was announced that certain addresses and papers would be read, and demonstrations given. So far so good, but as these papers &c. were distributed among at least three different sections considerable confusion and trouble arose, and the concession was still further minimised by the apparent and natural desire of each section to devote itself exclusively to its special work, and place anæsthetic subjects in the background. Add to all this the general and, I suppose, inevitable uncertainty of the exact date, hour, and place of meeting of the several sections, and I think that it will be readily understood that the unfortunate anæsthetist feels that there is room for improvement in the future. On former occasions I have emphatically insisted in your columns upon the importance of the systematic study and teaching of anæsthetics as a separate branch of our art, and I am pleased to see that the interest taken in the subject is increasing—I may say daily. I may therefore, perhaps, be pardoned if I hazard the opinion that the time has arrived—or will, at any rate, have arrived by the date of the next Congress—when a separate section could be devoted to the consideration of anæsthetic subjects, with advantage to science generally and certainly with comfort to the anæsthetist.

I am, Sirs, yours obediently,

Chandos-street, W., Aug. 27th, 1890. J. FREDK. W. SILK.

THE TREATMENT OF DYSENTERY.

To the Editors of THE LANCET.

SIRS,—I wish to bring before the profession the treatment of acute dysentery with full doses of ipecacuanha powder which has been deprived of emetine. I have used this powder in many cases of dysentery of late, and have been much pleased and gratified with the result, and, what is more, my patients have been saved the fearful nausea and vomiting and depression which have usually in my experience followed large doses of ipecacuanha given in the ordinary way, and which I have little doubt were caused by the emetine. The thought has been in my mind for the past ten or twelve years, but I have only now worked it out. Messrs. Symes and Co. of this town have fully carried out my idea, and I have no doubt that the same thing could be much more thoroughly accomplished on a large scale by the numerous manufacturing chemists at home. As far as I can ascertain it has been generally assumed that all the good effects of the powdered root were due to the large proportion of emetine which it contains (varying from 10 to 16 per cent.). This may be so, but nothing has as far as I have read been worked out about the therapeutic proportions of the other ingredients of the root. At all events, I have found by practical experience that the removal of the greater portion of the emetine does not take away from the power of ipecacuanha to cure dysentery. I have found that my powder causes little or no nausea, and that the patients are much more comfortable and not depressed at all, and that all the dysenteric symptoms rapidly disappear, the griping pain and tenesmus lessen rapidly, the stools become feculent and bilious, and the blood and mucus rapidly disappear. I would ask for an extended trial, and I hope that others will find it as successful as I have. Possibly some may say that the good effect may still be due to the minute quantities of emetine which have not been removed, and if it be found on further trial that ipecacuanha powder completely deprived of emetine is inert in dysentery, then it will be proper to give the pure emetia in fractional doses ($\frac{1}{100}$ to $\frac{1}{50}$ grain, according to Martindale), and combined in such a way as to obviate the nau-eating effects without lessening its therapeutic effects. I would suggest a trial of the gallo-tannate of emetine in suitable cases of dysentery, as, according to Watts,[1] it is neither emetic nor poisonous. If, on the other hand, it is found by others that the curative principle *quâ* dysentery is not the emetine, then the sufferer from dysentery in India or elsewhere will not, as at present, have to undergo the misery of large doses of ipecacuanha in addition to the tortures of his disease. From personal experience I can say that there are few medicines which will produce so much misery and depression as forty- or sixty-grain doses of the ordinary ipecacuanha powder. I hope to communicate further details subsequently. At present I am sending as much of the prepared powder as I can get Messrs. Symes to make me to Calcutta to Surgeons-Major Birch, McConnell, and Crombie, to have it fully tried in the large European and native hospitals of that city.—I am, Sirs, yours obediently,

GEO. A. HARRIS, M.R.C.S., L.R.C.P. Lond.,
July 19th, 1890. Civil Surgeon, Simla.

P.S.—I may add that the ipecacuanhic acid is at first abstracted, but subsequently remixed with the powder after the emetine has been removed. Is the sediment which is found in old samples of ipecacuanha wine an ipecacuanhate or gallo-tannate of emetine, and is that the reason why old specimens of vin. ipecac are inert? I see that the writer of the article on Dysentery in Quain's "Dictionary of Medicine" throws doubt on the depression which large doses of ordinary pulv. ipecac. produce. I can only say that my experience, and that of others I have asked, is not in accordance with that of Dr. Ewart. I have found that cocaine will in some cases lessen the nausea produced by ordinary pulv. ipecac.

"INTERNATIONAL CONSUMPTION OF MEAT."

To the Editors of THE LANCET.

SIRS,—Your article on the amount of meat consumed by Australians has a wider interest than appears on the face of it. Speaking to an old Australian colonist the other day, he said they had "more hopefulness and go" in them than the people of the old country, and he attributed this more to their eating more meat than to any other cause. The United States come next in the largeness of their consumption of meat, and we know the proverbial character for energy of the "Yankee." I believe you may almost gauge the character of a people by the amount of nitrogenous food it consumes. England stands well in this respect, as your article shows. Taking non-nitrogenous food, we in England consume 6 lb. of bread or its equivalent per week per head, France consumes 10 lb., Germany 11 lb., Spain 7 lb., Italy 8 lb., and Norway 6 lb. Take the physique of each nation, and I think we come out well. At least, this is my opinion after personal observation of them all. Those nations who consume large quantities of non-nitrogenous food are too fat—witness the French, Germans, and Italians. In treating great numbers of people for obesity, I have noticed how much lighter—in both senses of the word—and more active and energetic they become when non-nitrogenous diet is almost debarred. We need not go out of our own country to see the influence of food in daily life. Take the physique and energy of the meat-eating Yorkshire labourer and his Hampshire brother, who lives almost entirely on bread. They do not seem of the same nationality. To convince obese people what diet will do, I often instance the case of the horse out at grass—flabby, fat, and lazy, and the same animal put on corn, and in condition, strong, active, and high-spirited. This argument convinced an obese patient, but he was doubly convinced when he lost by dietetic means alone seventeen pounds in three weeks. I am writing to some medical friends in Australia to give me information as to the average duration of life there, and to inquire if the large amount of meat eaten there influences it or the health in general.

I am, Sirs, yours faithfully,
Aug. 23rd, 1890. N. E. YORKE-DAVIES.

To the Editors of THE LANCET.

SIRS,—In your annotation on the above interesting hygienic question, after mentioning that the consumption of meat per head in our Australasian colonies is at present about 276 lb., against 105 lb. in this country, and 48 lb. in Russia, you naturally inquire "whether the effect of this enormous consumption of meat affects in any degree the Australian mortality statistics." I have been accustomed to consider that the reason why the death-rate in New Zealand is so low as it is, is precisely because of the abundant supply of digestible animal albumens at the command of the population of that colony. Last year I find that the colony had a population of 650,000 and a death-rate of only 9·5 per 1000 inhabitants. Reducing this to a population similar in ages to those of our home population, the death-rate of New Zealand was still only 12 per 1000, against 19·5 in Great Britain. This I have hitherto attributed to the fact, not of the greater healthiness of New Zealand, for I do not believe any climate is more favourable to longevity than that of Great Britain, but to the fact that the 650,000 inhabitants of New Zealand possess 16,000,000 sheep, besides plenty of cattle and pigs, so that they are all well fed, which of course is not the case here or in any European country among the indigent classes. Indeed, I am surprised that so much time is taken up by inquirers on hygiene in getting rid of the *lædentia*, and so little thought expended in trying to secure the *adjuvantia* of human life—i.e., sufficient food for the different nations of Europe. As we cannot rapidly add to our food-supplies, it would seem rational to imitate the French, and not increase too fast.

I am, Sirs, your obedient servant,
London, Aug. 25th, 1890. C. R. DRYSDALE, M.D.

"HERPES WITH TONSILLITIS."

To the Editors of THE LANCET.

SIRS,—The cases given by Dr. Collie under this head at p. 341 of THE LANCET for Aug. 16th point to a specific fever, and to a disease distinct from diphtheria, enteric or scarlet fever, excepting Case 4, which looks like a second attack of scarlet fever. The initial symptoms in these cases are those of most of the specific fevers, and the local lesion, not merely a follicular tonsillitis, increases as the fever declines. It is not directly, or at least not markedly, dependent upon personal contagion; and, as far as I have

[1] Dictionary of Chemistry, vol. ii., p. 485.

been able to follow cases of this kind, one attack is not protective against a recurrence; the herpetic eruption, though a frequent result of the attack, is not so constant or distinctive as to give its name to a disease that deserves recognition and independent study. It is now twenty-five years since the marked distinction of attacks of this kind from those of diphtheria struck me, and also their relationship both to febrile catarrh and to diarrhœa. How close may be their connexion with epidemic laryngitis and pneumonia has yet to be determined; so far the two latter seem to me rather allied to herpetic catarrh than to be identical with it. They may be seasonal forms of it, more prevalent in spring, as summer diarrhœa and winter colds are often the pulmonary and gastric forms of it. Cases of this herpetic fever, with stomatitis or follicular tonsillitis, were certainly frequent last autumn in London; one or two such, to my knowledge, were near being sent to the Asylums Board hospitals as cases of diphtheria, but remained at home without any ill result to other children in the same rooms. From Suffolk I have Mr. George E. Jeaffreson's account of cases of "herpetic fever" lately. In addition to eruption on the lips and throat, he mentions herpetic spots on the body and limbs, at first like the lenticular rash of enteric fever, though occurring earlier, and after the fever declines. At the Academy of Sciences at Paris, Drs. Verneuil and Germain Sée, on August 20th last, called attention to the increase of cases as above mentioned, and something like to diphtheria, since the epidemic of influenza. Even if these hold the position I have suggested in your columns and elsewhere, instead of their concurrence with cases of autumnal diarrhœa being a cause of alarm, they would be reassuring, as indicative that diarrhœa with us this season belongs to the milder form associated with Finkler's *Spirillum* and not to the Asiatic form, for which Koch claims his specific comma bacillus; and the two diseases are quite distinct and independent.

I am, Sirs, faithfully yours,

Harley-street, W., Aug. 25th, 1890. WILLIAM SQUIRE, M.D.

THE ALLEGED OUTBREAK OF ENTERIC FEVER NEAR SITTINGBOURNE.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of the 23rd inst. you state: 1. "A serious outbreak of enteric fever has taken place at Murstow, near Sittingbourne." 2. "We assume that its cause has not been fully dealt with, since it is still spreading." 3. "The sanitary authority have a good isolation hospital, and a number of patients are stated to have already been received into it."

The following is the real state of things: 1. It is fallacious to suppose a serious outbreak (meaning an epidemic) has taken place, as only seven cases have been notified, and for the last fourteen days no fresh case has occurred. 2. Immediate action was taken as soon as the cause was discovered, which was not in the dwellings (which are in the most wholesome condition and receiving their drinking water from the Sittingbourne works), but away in the marsh where the men work, and so the increase of cases was stayed. 3. It is true we have a typical infectious hospital, and of the twenty-four beds, sixteen are full, but five or six patients are convalescent, and leave to-morrow. This hospital belongs, as it were, to the Milton rural, also the Sittingbourne and Milton several urban authorities, thus taking in the whole unions.

I hope you will correct your statement after my explanation. I am, Sirs, yours faithfully,

HY. G. SUTTON, M.D.,

Sittingbourne, Aug. 27th, 1890. Medical Officer of Health.

REVISION OF DIAGNOSIS IN NOTIFICATION CASES.

To the Editors of THE LANCET.

SIRS,—Referring to your article and correspondence respecting the Infectious Diseases Notification Act, 1889, it appears to me from the wording of the Act that the medical officer of health has no power to refer to the diagnosis of the medical practitioner notifying, nor the local authority to refuse payment of the fee on the plea of error of diagnosis, for the practitioner is bound under a penalty to notify that the patient is, in his opinion, suffering from the disease notified as soon as he forms that opinion, and certainly his opinion, if honestly formed, is worth as much as, probably more than, that of the medical officer of health, or that of any other practitioner called into the case. Surely, if the diagnosis of the medical attendant notifying is to be challenged by the medical officer of health, there should be some impartial tribunal to whom doubtful cases should be referred. It is beside the mark for a medical officer of health to reject a diagnosis because he finds the patient on the day or the day after notification in the door of the dwelling-house, in the yard connected therewith, or in the playground without any symptoms to confirm the diagnosis, for it must be the experience of everyone in large general practice that cases of small-pox, diphtheria, scarlet fever, and typhoid are frequently brought to one's surgery while suffering from these diseases in all their stages, and that in many cases of scarlet fever there is nothing to show the existence of the disease after the fading of the rash until desquamation commences, which may be delayed for three weeks.

I am, Sirs, yours faithfully,

London, Aug. 23rd, 1890. J. M. F.

HOMŒOPATHY.

To the Editors of THE LANCET.

SIRS,—The fact of your having admitted a letter from a homœopath into your columns may be taken as a proof that you do not utterly despise the claims of these practitioners to belong to our profession, and that you do not consider them otherwise than as honest, though irregular, professional men. In common with many others, I can record a broken friendship and losses of relatives, with others of my *clientèle*, because of a refusal to meet and to correspond with homœopaths. The case of the late Sir W. Fergusson was before me, and we can all remember that during and after the illness of the late Earl of Beaconsfield a well-known physician who had even ventured to be in the same room with an eminent homœopath, who has since recanted, received a series of underhand professional blows from which he perhaps suffers to this day. Should this be? The globule question has been strongly urged as a proof of dishonesty amongst these men, but were not their wholesale druggists answerable for these *placebos*? And can we all of us say we have never given a *placebo* in our lives? When a medical man becomes a homœopath is his name expunged from the Register, and is he expelled his College? I believe no such case is on record. Ought we to refuse to meet a practitioner whose name is upon the Register issued by the Council? Might not such a proceeding lead to an action at law? It seems that the time is coming when we shall meet them, and as they have abandoned, virtually, their small-dose theory there remains only the dogma of the *similia similibus* between us; we could write separate prescriptions, and leave our patient to choose his own remedial path. We can gather no light from the proceedings of our sister professions in their treatment of irregular practitioners, for in the case of the Church those who advance to the utmost extremity of religious belief are molested by a strong section of the public without; whilst those who descend to a denial of almost the first principles of their faith are persecuted from within. The lawyers seem to have no heresies, and although they have an etiquette at the Bar, yet it is washed out at home with all quietness. Should we cold shoulder homœopaths any longer? Let them be treated charitably, for they are a dying race, and their work has done us some good—they have been the pre-Raphaelites of medicine. That THE LANCET will let in more light is the hope of, Yours obediently,

Mandeville-place, W., Aug. 18th, 1890. FREDK. SIMMS.

THE REPUTED CHOLERA CASE IN LONDON.

To the Editors of THE LANCET.

SIRS,—In the reputed case of Asiatic cholera in THE LANCET of the 23rd inst., I observe it stated there was secretion of urine, also of bile "from the offensive evacuations." Now, in all the cases I have seen there was no secretion of urine or bile found in the rice-water evacuations. My observations are derived from being cholera district surgeon in 1842, and also being with the late Dr. Mackintosh in the Cholera Hospital in 1831, in Edinburgh.

I am, Sirs, yours truly,

Riversdale-road, N., Aug. 25th, 1890. V. SINCLAIR, M.D.

THE INTERNATIONAL MEDICAL CONGRESS IN BERLIN.

(FROM OUR SPECIAL CORRESPONDENT.)

THE following is a record of the proceedings in the Section of Neurology and Psychological Medicine.

Surgery of the Nervous System.—In the discussion upon Mr. Victor Horsley's paper on this subject, Dr. Althaus drew special attention to the proposal of the author to ligature the carotid if cases of cerebral hæmorrhage are seen soon after the onset as the only means to arrest the hæmorrhage. In cases of syphilitic brain tumours he would not readily recommend surgical interference, as less anti-syphilitic treatment often gives very good results.—Dr. Oppenheim (Berlin), in illustration of the subject of cerebral surgery, gave the further history of cases which he had already described. Of these, one was a case of fracture on the left half of the occiput, with bilateral right hemianopsia for colours only. Trephining over the occipital lobe without opening the dura mater relieved all the symptoms. The second, a female patient suffering from Jacksonian epilepsy, paralysis of left side of face and left arm, with atrophy of muscles, headache, and vomiting, was trephined over the Rolandic area and a cysto-glioma removed, with marked improvement and disappearance of the paralysis. (A few days ago the patient was delivered of a healthy child.) The third was a case of spastic hemiplegia with athetosis, contractions, and frequent epileptic convulsions, the symptoms dating from the fifth year of life. A hæmorrhagic cyst, situated over the cortical motor area, was removed by operation, and since then the athetosis has improved and the epileptic seizures have entirely stopped.—Dr. Dunin (Warsaw) related the case of a child suffering from Jacksonian epilepsy. Anti-syphilitic treatment having been tried without effect, the skull was trephined, and from the ascending frontal convolution a black, tumour-like mass was removed. The operation was followed by temporary aphasia and hemiplegia, which, however, soon disappeared. The child was considered cured, as the fits ceased and the paralytic symptoms disappeared. The epileptic fits, however, returned, and the child died four months after the operation. The post-mortem showed a hæmorrhagic cyst occupying the part operated on and dilatation of the ventricle on that side. The author believed that death was in some degree to be attributed to the operation, and would recommend operative interference only in the case of tumours.—Professor Erb bore testimony to the great progress of the treatment of cerebral disease by operative interference, and pointed out the importance of determining the class of cases in which operation was likely to be useful, and the time when it should be recommended. The differential diagnosis between cerebral hæmorrhage and cerebral embolism or cerebral thrombosis was at times so difficult that the proposed ligature of the carotid in cerebral apoplexy "was not very feasible." He further pointed out the uncertainty of an exact localisation of some tumours which gave rise to cortical symptoms, and yet were found to be situated in the substance of the brain, and press against the cortex. The same difficulty occurs with spinal affections, though he fully recognised the importance of operating in all those spinal cases where the disease is situated outside the medulla.—In relation to the subject of cerebral surgery, we have also to mention a paper by Dr. Burkhardt (Préfægier) on Extirpation of Portions of the Cerebral Cortex for the Treatment of Psychoses. The author related six cases. Case 1: A female patient, aged fifty-three, suffering from chronic mania, with dementia. She was operated on four times, and portions of the parietal lobes and of the third frontal convolution were removed. The patient has very much improved. The excitement and dementia have much abated. Case 2: A male patient, aged thirty-one, suffering from mania. Parts of the first and second frontal convolutions were removed. The patient improved. The other four cases were chiefly marked by hallucinations of hearing, and for this reason parts of the first temporal convolution were removed. Of these four cases three improved, and in these there was noticed temporary word-deafness. One of them committed suicide not long after the operation. In the fourth case the Sylvian fissure was found covered with firm exudations, and to enlarge the opening the chisel was used. Soon after the operation the patient improved, the hallucinations disappeared, but convulsions set in, and the patient died. The post mortem showed meningeal hæmorrhages.

Traumatic Neurosis.—The subject was introduced by Professor Schultze (Bonn), who formulated the following theses: 1. Traumatism produces various psychoses and neuroses, but there is no special traumatic neurosis. 2. No reliance can be placed (*halten einer Kritik nicht aus*) on those symptoms said to be characteristic of traumatic neuroses—namely, contraction of the field of vision and disturbances of sensibility. 3. Simulation is very common. 4. No objective criteria have as yet been found to distinguish simulation from genuine cases. The author in his discourse well recognised the appearance of functional nervous disorders following traumatic lesions of the skull and spinal canal; these disorders belong either to the class of hysterical affections, or to the group of symptoms known as neurasthenia, or to both. He did not see why to these affections a new name should be given, as Oppenheim had done; nor was he willing to adopt the local or partial neurosis of Strümpell. The psychological element plays an important part as an etiological factor, and a certain nervous predisposition is also to be taken into account. It is sometimes very difficult to distinguish this functional disease from organic disease, and the two may occur together. On the other hand, simulation occurs very frequently, and on this point the author agreed with Hoffmann, who published quite recently a paper on this subject in the *Berliner Klinische Wochenschrift*. The absence or exaggeration of reflexes is an important symptom, and points to an organic disease.—In the discussion which followed, Oppenheim (Berlin) defended the views he had taken, and which he had laid down in his well-known monograph. He laid stress on the contraction of the field of vision as a symptom not easily simulated, especially as the perimetric measurements could be taken at different times and compared. Simulation was rare. He proposed the appointment of a commission to investigate the subject.—Dr. Seeligmüller believed that simulation exists in about 25 per cent. of the cases of traumatic neurosis.—Professor Hitzig (Halle) did not think that simulation is so very common; he, however, believed that the patients are given to exaggeration, and this is in great measure due to the fact that the patients are or become hypochondriacal. Speaking of the symptomatology of traumatic neurosis, the author found as his experience that contraction of the field of vision beyond the physiological limits is rare; insomnia and increased frequency of the pulse are important symptoms, and their presence can be controlled.—Professor Mendel (Berlin) agreed with Schultze in most points.—Dr. Thyssen (Paris) advocated the term "traumatic hysteria," first introduced by Charcot.—Among the other speakers may be mentioned Dr. Hoffmann (Leipsic), who maintained the correctness of his statements contained in his paper above referred to, and Professor Benedict (Vienna), who spoke of the great difficulty of defining the limits of simulation. He looked upon the contraction of the field of vision, which often increases during the progress of the disease, as a symptom of some value. In reference to the peculiar form which this discussion had taken, he might state that only recently a law corresponding to our Employers' Liability Act (*Unfall Versicherungs Gesetz*) had been introduced in Germany, and hence the prominence given to the question of simulation. In England, the home of the "railway spine" and "railway brain," traumatic neurosis, with all its complications, and the associated simulation and exaggeration, is well known.

The Pathological Anatomy of General Paralysis formed the third subject for discussion. Professor Mendel (Berlin), who introduced the subject, gave a brief historical sketch, and pointed out that most of the lesions are common to other brain affections besides general paralysis. Observations made by Friedman and himself on incipient cases of general paralysis showed that the vessels are the parts primarily affected, as demonstrated by some preparations which he exhibited; that the disease of the vessels gives rise to extravasation, which, acting as a foreign body, causes chronic inflammation of the neuroglia, while the nerve tubes and cells undergo secondary atrophy. In support of this view, he cited the occasional commencement of the disease by apoplectic or epileptic seizures. He showed a dog in which, by quick rotation produced by a centrifugal machine, intense hyperæmia was produced with symptoms like those of general paralysis, the principal symptoms being general apathy and muscular paresis.—Dr. Dagonet (Paris) drew attention to certain hyaline globules in the pia mater and cerebral vessels found in the brains of general paralytics, and which had been already described

by Adler, Obersteiner, and other observers. These globules have been studied by the author, who found them very resistent to reagents and not easily stained. Treated after Weigert's method, they appear black; stained with dahlia, they assume a blue colour. Though found almost constantly in general paralysis, they are seen in other brain affections; and Meynert has described them in the brain of epileptics.—Professor Mierzejeiosky (St. Petersburg) pointed out that he had already, many years ago, described as the primary changes in general paralysis affections of the vessels and the neuroglia, and looked upon the lesions of the true nerve elements as secondary and coming on late in the disease. He also drew attention to the cysts found in the meninges and to the affections of the ependyma, which causes a diminution, or even complete obliteration, of the aquæductus Sylvii.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

The Hospitals.

IF the interest taken by the public in the proposal to rebuild the infirmary is to be gauged by the attendance at the annual meeting lately held, such interest is very small indeed; and it is pretty generally felt that at present the case for undertaking any such important scheme is not very strong. The board had a highly favourable account to give of the year's work of this charity. The infirmary and its allied institutions now contain 1000 beds, of which 298 are in the infirmary proper, 136 in the Convalescent Hospital, 260 in the Lunatic Asylum, and 306 in the Fever Hospital. The finances are, on the whole, very satisfactory. The balance of income over expenditure at the infirmary was nearly £4000, at the Fever Hospital £3700; at the Convalescent Hospital there was a deficit of £2659, but, as there is practically but one purse amongst the three institutions, there remains a good balance on the right side. The Lunatic Asylum always pays its way, and its funds are kept quite distinct from the three other branches. At the monthly meeting of the Board held yesterday, an unusual number of new appointments were made in addition to the six junior resident posts made every six months to the infirmary, and one at Cheadle. Dr. Lomas was appointed resident medical officer to the Cheadle Convalescent Hospital, in place of Dr. Johnston, appointed medical superintendent to the Fever Hospital. The latter post has for the past five years been held by Dr. Oldham, who is now leaving. Considerable additions are about to be made to the Fever Hospital—a new convalescent block for scarlatina patients and a new nurses' home for sixty or seventy nurses. It is but a year or two since a nurses' home was built here for forty nurses, and this is now found to be too small. Already the fever branch has outgrown in size the present institution, and apparently its full development has not yet been reached.—The Lock Hospital has lately lost an old and valuable servant by the death of Mrs. Naylor, who for more than forty years was matron here, doing in a quiet and unostentatious manner good both physically and morally to many of the unfortunates who passed through the wards of the Lock.—At the Hope Hospital of the Salford Guardians yet another Local Government Board inquiry has just been concluded into the management and administration of this institution. The inspector's report has not yet been received, but at the close of the inquiry he remarked that the Hope Hospital ought to be one of the best-administered hospitals in the country if official inquiries helped to bring about such a result.

Health Matters in the Corporation.

The Manchester City Council has received from its medical officer of health a report, the pith of which is that, in his opinion, the first and most pressing need that exists in the health machinery of the corporation is the consolidation and concentration of the sanitary work of the council; that at present this is scattered over various committees, charged primarily with other matters; and he asks that all matters affecting the health of the community at large may be dealt with, as far as possible, by one committee. This report has been referred to a special committee for consideration. In the Salford Council attention was directed at its last meeting to the fact that a report of Mr. Paget, the officer of health, condemning a district of the borough as an unhealthy area, had not been acted upon, but practically had been sent back to him by the health committee, and that action was to be taken only in a few special cases where he had certified the house as totally unfit to live in. If the medical officer believes that any district is in such an insanitary condition as to warrant him in condemning the whole of such area, it is but temporising to close half a dozen houses in such area.

Crumpsall Infirmary.

The Manchester Board of Guardians have decided, subject to the consent of the Local Government Board, to make some important changes in the medical administration of their workhouse hospital at Crumpsall. Hitherto Mr. Hardie has been the sole visiting medical officer, with a resident staff of house surgeons under him. For some years past the desirability of having a visiting physician as well as a visiting surgeon has been talked of, and this is now to be effected.

Arsenic Poisoning.

Two children have been fatally poisoned by eating rice pudding in which large quantities of white arsenic were found. The mother also suffered, but recovered. Suspicion attaches to the father of the children, and he is at present under arrest charged with their murder. Large quantities of arsenic were found in various parts of the house, and evidence was given as to the facilities the prisoner had for obtaining quantities of arsenious acid.

Manchester, Aug. 26th.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

Barnard Castle.

NOW that many are moving about in search of health, and at the same time objects of interest, the old town and neighbourhood of Barnard Castle, Yorkshire, should not be overlooked. There are now increased facilities for reaching it, as a new express service has been put on from Sunderland by way of Durham and Bishop Auckland, from which it runs to Barnard Castle in about twenty-six minutes. Apart from the very fine situation of Barnard Castle, with its historical associations, there are many places of interest within an easy distance of the place—Raby Castle, Bowes Moor, the Greta and Tees, well known to anglers, and then the quaint old town itself, with its famous Bowes Museum. The museum is erected in the style of the French Renaissance. The design is copied from the palace of the Tuileries. The south or principal front is 300 ft. in length, the east and west wings are each 130 ft. in length. The basement and top floors are set apart for residential purposes. In the rooms on the first floor are collections of pottery, porcelain, glass, carved ivory, crystal, &c. On the second floor are paintings, principally by the late Countess Montalbo, and also about 1000 religious and allegorical pictures by foreign and British artists, including specimens by Murillo, Fra Angelica, Sir Joshua Reynolds, Hogarth, and others. The foundation stone of this splendid museum, which deserves to be better known, was laid in November, 1869, by the Countess Montalbo, the wife of the late John Bowes of Streatlam Castle, who, however, did not live to see the work completed, but died amid general regret in 1874. At the death of Mr. Bowes in 1885, the scheme of the museum had not been carried out in its entirety, but it is anticipated that the endowment bequeathed by him will suffice for its completion and maintenance.

Middlesbrough.

Dr. Malcomson, medical officer of health, reports an improvement in the health of Middlesbrough. Still, of 138 deaths 50 occurred in infants under one year, and 20 were due to pneumonia, which may now be considered as endemic to the town and district. An attempt is being made by some of the guardians at Middlesbrough to control the amount of quinine, cod-liver oil, &c., ordered by the medical men of the union to pauper patients, and they reason that because one medical officer prescribes more quinine than the others there must be something radically wrong, but this attempt to influence prescribing should be strongly resisted.

North and South Shields.

The annual demonstration of the friendly and trades societies of North Shields and district in aid of the Victoria Jubilee Infirmary took place on last Saturday, and was an

imposing affair. The procession was headed by the band of the Tynemouth Artillery Volunteers, and the proceedings were carried out with much spirit, and it is to be hoped with advantage to the charity. At the last meeting of the governors of the South Shields (Ingham) Infirmary it was mentioned, as an instance of the increased interest being taken by the working classes in the charity, that the subscriptions from them, which were £284 in 1888, had increased to £615 in 1889. This infirmary was obliged to close altogether in March last owing to illness in the medical and nursing staff, which was found to depend upon defective drainage, the rectification of which cost over £500.

Scarlet Fever in Cumberland.

Scarlet fever has assumed an epidemic form at Netherton and Elleborough. Last week between seventy and eighty scholars were absent from school owing to the disease.

Newcastle-on-Tyne, Aug. 27th.

EDINBURGH.

(FROM OUR OWN CORRESPONDENT.)

Public Health Committee.

AT the meeting of this committee last week, the total deaths in the city for the month of July were reported. The death-rate for the month was 15·71 per 1000, which is rather below the corresponding month of the preceding two years. Of the deaths, 21·40 per cent were above sixty years of age, while 38·30 per cent were under five. Diseases of the chest accounted for 33·83 per cent., and zymotic diseases for 11·26 per cent. of the total deaths. The intimations during the month amounted to 306, and of these, 160 were cases of measles, 97 of scarlatina, 29 of typhoid fever, and 20 of diphtheria. During the same period 86 patients had been admitted to the City Fever Hospital, and 21 into the Convalescent Home. During the month, 18,293lb. of meat were seized or delivered up to the authorities as unfit for human food. The misleading use of the word "seized," to which the butchers had objected, would thus appear to have been modified so that the returns record somewhat less inaccurately the procedure under this head. The report on the annual examination of the bakehouses was more satisfactory than in previous years.

Disposal of the City Refuse.

At a subcommittee meeting of the Cleaning and Lighting Committee of the Town Council the question as to the best means of disposing of the city refuse was considered, and it was resolved to appoint a small subcommittee to visit various towns in England with the view of obtaining information on the subject. The hope may be ventured that the subcommittee may have a pleasant holiday, but this hardly seems the best way of obtaining information on this very important question at this time of day.

Addition to the Royal Infirmary.

The Dean of Guild Court have approved of additions, which are already under way, to the Royal Infirmary. They are to consist of a small ward with kitchen, bathroom, &c., and a new operating theatre. They are expected to be ready by the opening of the winter session.

The Veterinary Profession and the Pleuro-Pneumonia Act.

A special meeting of the Scottish Metropolitan Veterinary Medical Society has been held "for the purpose of considering the new Pleuro-Pneumonia Act, and the position of veterinary inspectors and the profession generally as affected by its provisions." Mr. H Thompson of Aspatria, the president of the Society, occupied the chair. A number of the members very freely condemned certain of the provisions in the Act, and expressed a very decided opinion that it was an insult to the profession. The following motions were adopted and ordered to be sent to Mr. Chaplin, the Minister of Agriculture: (1) "That in the opinion of the meeting the position of a veterinary inspector under the new Pleuro-Pneumonia Act is beneath the status and dignity of a veterinary surgeon, and some of the duties he is called upon to perform are foreign to the nature of his calling;" (2) "That the meeting memorialise the Board of Agriculture to afford to veterinary surgeons or inspectors reasonable facilities by post-mortem examination for proving the accuracy of their diagnosis before making a declaration;" and (3) "That, instead of being compelled to send the lungs to London for examination, the veterinary inspector of the district shall consult with the veterinary inspector for the county, with a veterinary surgeon acting for the owner of the cattle, and only in cases of dispute shall the lungs be sent to London, as proposed by the new procedure."

Health of the City.

The mortality last week was at the rate of 14 per 1000. Diseases of the chest accounted for 17 deaths, and zymotic causes for 15, out of a total of 75. Of the zymotic cases, 7 were due to whooping-cough and 4 to scarlatina. The intimations for the week included 8 cases of typhoid, 7 of diphtheria, 32 of scarlatina, and 12 of measles.

Anonymous Donation to the Royal Infirmary.

The Royal Infirmary has received an anonymous donation of £1000, and the managers have recorded their desire "most gratefully to thank the anonymous donor for his munificent and truly Christian gift."

Edinburgh, August 26th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

DUBLIN.

The Royal College of Physicians of Ireland.

THE College has applied to Her Majesty for letters patent to enable that body to assume the title of "Royal College of Physicians of Ireland," which has been granted.

Reformatory and Industrial Schools, Ireland: Annual Report.

From the twenty-eighth report it appears that the admissions to reformatories during the past year show a decrease of 45 as compared with the preceding year; while the number sent to industrial schools increased by 152 during the same period. As regards the health of the 8000 children in these schools, it is satisfactory to learn that there were but 3 deaths from zymotic diseases—2 from fever, and 1 from whooping-cough. Most of the other deaths (77) resulted from scrofula, 56 being due to lung disease, 3 to spinal and hip disease, and 4 to mesenteric disease. Dr. Plunkett O'Farrell, the efficient inspector, states that he has noticed a marked diminution in the number of cases of ophthalmia, ringworm, and other diseases which require constant attention and supervision on the part of the managers. Ignorance has much to do with the sickly lives and early death of many children, and managers of public schools should, in regulating the feeding and treatment of children, study much more than they do those hygienic and physiological laws which govern the lives and health of all mankind, and the infringement of which leads, especially in the young, to physical deterioration and so very often to lifelong unhappiness. Of those admitted to reformatories 41 per cent. could neither read nor write, and 56 per cent. of those admitted to industrial schools were illiterate.

Health of Ireland for June Quarter.

The birth-rate for the quarter was 0·8 under the average rate for the corresponding quarter of the past ten years, while the deaths were above those registered in the June quarter of 1889 to the extent of 424, but 1·2 under the average for the second quarter of the ten years 1880–89. The epidemic of influenza which prevailed during the earlier months of the year did not exist to any considerable extent; but the excessive mortality that usually accompanies that disorder was fully maintained. The principal zymotic diseases caused 1165 deaths, equal to an annual rate of 1·0 per 1000, being 0·5 below the average.

Injuries from Sulphuric Acid.

A young girl named Margaret Sullivan, residing at Macroom, was recently the victim of a diabolical outrage, a quantity of sulphuric acid having been thrown over her face and neck. She now lies in a very prostrate condition, and her recovery is doubtful. The left side of her face is one large ulcer, and it has extended to the side of the neck. Part of the left ear and the sight of the eye on the same side have been destroyed, while there is little hope that the vision of the remaining eye will be restored. The patient lives wholly on liquids, as solid food cannot be partaken of in her present condition. It is satisfactory to learn that there is every probability that her dastardly assailant will receive well-merited punishment for his cowardly act.

The death is reported of Mr. Henry David Purdon at

Bray, county Dublin, after a long illness, aged forty-one years. Deceased was formerly medical officer of Ballyboggan Dispensary.

The Science and Art Museum and National Library, Dublin, will be formally opened by his Excellency the Lord Lieutenant this week.

Dublin, Aug. 26th.

BELFAST.

Queen's College.

A valuable endowment has just been placed at the disposal of the authorities of Queen's College, Belfast, by Her Majesty's Commissioners for the Exhibition of 1851. It is a nomination to a Science Scholarship of £150 annually, tenable for two years, or in special cases for three, by a student who has completed at least three College years. The object is to allow students who have passed through an ordinary College curriculum to continue the study of science, with the view of aiding in its advance, or in its application to the industries of the country.

The University Extension Scheme.

The autumn term will open in October, and there are to be six courses in all—one by Sir Robert Ball, F.R.S., on Astronomy; two by Professor Letts, one on the Chemistry of some Common Things, and another for working men; and three by Mr. S. J. M'Mullan, M.A., on Literary Subjects.

The Royal Hospital.

At the quarterly meeting of the General Committee, held on Aug. 25th, I find it reported that during the previous three months there have been 513 intern patients; of these, 281 were surgical and 232 medical. During the same period there were 4952 extern patients. On July 31st the debt of the hospital was £1496 2*s.* 1*d.* Special reference was made at the meeting to the deaths of Dr. Cutler (house physician) and Dr. J. W. T. Smith. A letter of condolence has been sent by the committee to the relatives of each of these gentlemen. Dr. Whitla was re-elected physician, and Dr. Henry O'Neill surgeon to the hospital. Dr. Mitchell was appointed house physician. Special attention was drawn at the meeting to the great want of accommodation for phthisical patients in Belfast. It is hoped an additional wing will be built at the Throne Consumption Hospital.

Belfast, Aug. 26th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Inoculation a Protection against Tuberculosis.

MM. GRANCHER and MARTIN have been engaged for the last two years in prosecuting inquiries and making experimental researches with a view of ascertaining whether or not it may be possible to procure immunity from the danger of tubercular infection—or at least to place the system in a condition of resistance similar to that in which the previously vaccinated are in regard to small-pox, and in the case where the infection may be already an accomplished fact, to stem the inroads of the disease—by the inoculation of attenuated tubercular virus, as is now done in hydrophobia by the inoculation of weakened virus of rabies. The publicity given by Koch at the recent Congress in Berlin to his researches in the same direction has prompted the French observers to make known the results so far obtained by them in the same field of inquiry. The animal they selected for experimental purposes was the rabbit, and the method of inoculation adopted was the intravenous one, on account of the certainty with which this method sets up acute and fatal tuberculosis, with constant and well-marked lesions of the liver, spleen, and lungs. The disease thus brought about being always mortal, the observers were enabled to appreciate with tolerable precision the positive or negative results of their succeeding experiments. A tubercular culture was prepared from the spinal cords of these animals dead of tuberculosis, and attenuated after the manner adopted by Pasteur in his manipulation of rabic virus, the several preparations being numbered according to the degree of their intensity. Then, by taking healthy animals, beginning with the weakest injections and gradually going on to the stronger, it was found that after a time the animals developed a power of resistance which varied amongst different ones, but in most was of a kind to repel fatal infection from a virus so lethal that fresh animals inoculated with it succumbed in a short time to what was proved post mortem to be tuberculosis. For instance, seven rabbits were inoculated on Dec. 31st, 1889, with an extremely virulent preparation. Of these one had not undergone any previous inoculation with the attenuated virus, and it died twenty-three days afterwards of the communicated disease. Five of those which had been subjected to, and thus protected by, anterior inoculation lived 126, 176, 176, 184, and 189 days respectively. As to the sixth, it is even now living, 229 days after the operation. In conclusion, MM. Grancher and Martin claim to have proved that, on the one hand, it is possible by inoculation to evoke in the animal economy a prolonged resistance to the most rapid and fatal form of communicated tuberculosis, and on the other to confer against infection by this disease an immunity, the duration of which, however, remains to be determined. They add that the results obtained by Koch on guinea-pigs, having been achieved by methods somewhat different, give ground for hope that the day is not far distant when we shall have at our disposal more than one way of effectually combating the tubercular bacillus.

Artificial Hypodermic Respiration.

M. Cobes of Buenos Ayres read a paper bearing this title at the last meeting of the French Association for the Advancement of Science, the interesting conclusions of which may be summarised as follows. All living things have a surface of absorption and elimination, by which oxygen finds entry into the body's substance and the carbonic acid there produced is set free. In the higher animals the absorption and elimination respectively of these gases are carried on by means of a special apparatus, the lung, where the blood takes up its vital oxygen and rids itself of its burden of carbonic acid. But this same process is repeated, in the interior of the tissues, between the blood and cells situated at the actual focus of combustion. Oxygen introduced by hypodermic injection is absorbed by the capillaries in the same way as the oxygen which passes into the pulmonary alveoli is absorbed by the surrounding capillary network. Moreover, the carbonic acid by which the blood is charged is eliminated at the point where a traumatic emphysema is produced in the same way as in the pulmonary structure. During the injections the respiratory movements were observed to lessen, and this was proved to demonstration by tracings taken of the thoracic action. The absorption of the oxygen hypodermically was found to be in direct ratio to the surface and the time the current of gas was kept going. The elimination of the carbonic acid, on the other hand, was observed to vary according to the quantity circulating in the capillary vessels immediately adjacent to the focus of provoked emphysema. It is submitted therefore that it is clearly feasible to set up in the hypodermic cellular tissues an artificial respiration in every way similar to that which takes place normally in the pulmonary alveoli. Oxygen so injected causes no irritation or subsequent local trouble, but the gas being most active when fresh, that used for this purpose should therefore have been recently prepared. It is suggested, in fine, that artificial respiration thus carried out will be found to render vital assistance in all affections or conditions in which effectual aeration of the blood is impeded through a default in the working of the pulmonary apparatus.

Relief by Compressing the Neck in Tabes Dorsalis.

M. Mossé of Montpellier reported the case of an ataxic arrived at the cachectic period of the disease, in whom compression of the neck brought great relief to many of the most distressing symptoms, such as the gastric crisis, the sensation of cervical and thoracic constriction, &c., the duration of the relief varying from time to time, but always capable of being renewed by this simple means. He suggests, as to the precise way in which the procedure acts so beneficially, that it may be analogous to the similar relief afforded by the compression of special zones in hysteria, or the painful points in certain forms of neuralgia. As to the nerves, by way of which the relief is conveyed, the pneumogastric would appear to be the most likely; but in consequence of the complex anatomical condition of the region of the neck, it is not easy to say which of the nerve trunks here situated determines the desired inhibitory action. Therefore, without prejudice to the physiological mechanism concerned, M. Mossé would restrict himself to recording the fact that lateral pressure of the cervical region finds an undoubted result in modifying the distressing symptoms above named.

Cocaine in Obstetric Practice.

Dr. Bousquet of Marseilles has used cocaine in thirty-two cases of midwifery, twenty-two of which were ordinary deliveries, the remaining ten necessitating the performance of version or the use of the forceps. In all these cases, five to ten minutes before the expulsion of the head or the undertaking of operative measures, he either inserted tampons charged with a cocaine solution into the vagina, or injected hypodermically of the same solution into each of the labia majora. He records that this practice was always attended with considerable success, in some instances suppressing the patient's suffering at this stage of labour, while all experienced a marked modification. He concludes that cocaine is an agent capable of rendering much service in obstetric practice, that it is efficacious and harmless, and may be used in almost all cases. In two cases in which he had tried antipyrin he found the drug useless for the purpose of relieving pain.

Sorcery in France.

Enlightened as the French are as a nation, France is still the lingering home of many ancient superstitions. It is in the remote country districts especially, amongst the simple peasants, that the belief in the hidden mysteries of the occult sciences dies a hard and lingering death. In Limousin, for example, old-time sorcery still holds considerable sway, and its professors appear to do a thriving trade. The peasants attribute to them the power not only to cure certain maladies, but also to produce them, and, which is much easier of belief, to cause death itself. Two examples which have come to light will serve to show how these gentry may, under this superstitious guise, commit veritable crime. A woman twenty-five years old was suffering from chronic pelvic peritonitis. A sorceress was sent for, who elected to come in the dead of night and asked to be left alone with the patient, in order that she might conjure away the disease. After having practised certain manipulations, the exact nature of which no one seemed to know, but which were believed to have been more or less diabolic, she departed next morning, taking with her a good round fee. The next evening it was indeed evident that diabolic was the appropriate term to apply to her acts, for the poor patient succumbed to acute general peritonitis. Another sorcerer, having quarrelled with a neighbour, "cast an evil eye" at himself and his family, and informed them that they would certainly die within the year. Now, in order that this malediction might be realised, he threw a cow's placenta into the well from which his neighbour's family drew their drinking water. Some two months later the whole family, composed of five persons, were laid up with typhoid symptoms, of which the father and two sons died; while the mother and servant were with difficulty saved. Luckily the law is about to diffuse a little salutary light on these benighted people.

Paris, Aug. 26th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

The Death of a Member of the Medical Congress.

I REGRET to have to report that Professor Neugebauer was not the only member of the recent International Medical Congress who did not return home from Berlin. The Hungarian laryngologist, Dr. von Jelenffy, came to this city to take part in the labours of the Congress, but was not able to attend more than the first meeting. He fell ill and went to the Catholic Hospital, where he died of heart disease. His funeral took place on Sunday, and was attended by the physicians of the Catholic Hospital and most of the members of the laryngological section who were still in Berlin. Professor B. Fraenkel, the president of that section, spoke on the sad occasion, and sketched the life and services of the deceased with warm sympathy.

The Berlin Pathological Institute.

In his annual report of the Pathological Institute of Berlin University, of which he is the head, Professor Virchow complains bitterly of the want of room in that establishment. Although the copious material in the possession of the institute affords ample opportunity for demonstration (the number of necropsies last year was 1296), the want of room in the lecture hall and in the working halls is felt more and more acutely the greater the number of hearers and workers becomes. In the rooms in which the valuable collections are kept the light is extremely inadequate. These collections are perhaps the largest and most important in the world, but are arranged so closely that the study of them in the cabinets is absolutely impossible. It follows, as a matter of course, that—in some departments at least—there is no room for new acquisitions. Add to this that the architectural defects of the building are of the most serious kind. Virchow proposes that at least a new building for the collections and a new lecture hall should be added.

The Brains of Man and of the Lower Animals.

At the Anthropological Congress held lately at Münster, Professor Waldeyer of Berlin spoke on the brains of man and of the anthropoid apes. With the help of a number of excellent and very large drawings, he demonstrated the forms of the brains in question with their typical convolutions and furrows, and dwelt on the great resemblance between the human brain and those of the gorilla, the chimpanzee, the orang, and the gibbon. This resemblance, he said, is much greater than that of the simial brain to those of lower animals, such as the wolf, the fox, and the dog. At the same time there are unmistakable and regularly recurrent differences. In man, for instance, the furrow which runs out from the middle furrow about midway between its ends, and nearly at right angles to it, is extremely slight, whereas in the ape it is very long and deep, whence the German name *Affenspalte* (ape's cleft). The occipital lobe is also incomparably better developed in man, which makes the course of the furrow separating it from the parietal lobe more longitudinal. Finally, the human brain is much richer in orifices in the part connected with the centre of language, whereas in the ape a long furrow divides this portion into two, and thus cuts off the orifices.

The Inspection of Meat in Berlin.

The official inspection of cattle, meat, and meat markets in Berlin is now so comprehensive and careful that the guarantee of good meat may almost be said to have reached the limits of possibility. According to a report of the official veterinary surgeon, Dr. Hertwig, 18 veterinary surgeons, 6 assistant veterinary surgeons, 8 superintendents in the trichinæ department, 184 meat inspectors, 48 sample-takers, 16 stampers, a secretary and two book-keepers, a foreman, and a large number of male and female workers, are employed in the municipal slaughter-house alone. Among the meat inspectors there are 92 women—i.e., half of the number. Fifteen veterinary surgeons, 53 inspectors, 22 sample-takers, 8 stampers, 2 control-revisers, and 8 control-watchers belong to the stations where the meat is examined. The living animals in the stalls of the slaughter-house are examined several times a day, so that the condition of their health is ascertained in almost every case immediately before they are killed. Regarding the ruminants that are slaughtered, a very careful journal, containing all details of significance, is kept in the office. In the trichinæ department 184 meat inspectors are employed, in six sections, and 48 sample-takers in four. If trichinæ are found in a pig all the pigs from which the sample-taker has taken samples at the same time are at once treated as objects of suspicion, and continue to be so treated until it has been ascertained beyond doubt that the mistaking of one pig for another is out of the question. Pigs with trichinæ are at once stamped with a large red stamp as *trichinenhaltig*—i.e., containing trichinæ—whereas the healthy animals are stamped blue. For the inspection of fresh meat not killed in the slaughter-house eight stations have been at work since 1887, situated near the places where the meat arrives or at the market halls. Each station is superintended by a principal veterinary surgeon, who is assisted by other veterinary surgeons, meat inspectors, and sample-takers. Special officials are employed to control and observe the meat traffic, especially at night, in places of call where butchers from other places are wont to live, in the market halls at the time when the butchers drive up, &c. Unexamined meat found in shops and other places of sale is seized and sent to the knacker's yard for destruction, and the sellers are prosecuted.

The Naturalists' and Physicians' Congress at Bremen.

The sixty-third Congress of the Society of German Naturalists and Physicians will be held at Bremen from the 15th till the 20th prox. On the 15th the secretary, Dr.

Lassar of Berlin, will give his report; the eminent chemist, Professor A. W. von Hofmann of Berlin, will sum up the results of the investigations in natural science since the founding of the Society; city architect Franzius of Bremen will describe the phenomena of the tidal wave from Heligoland to Bremen; and Professor Chun of Königsberg will discourse on the pelagic fauna at great depths. On the 16th the members will meet in the sections and visit institutions, and will be entertained by the senate of the city in the Exchange in the evening. On the 17th, after the revision of the statutes and the election of the president &c., Professor Ostwald of Leipsic will speak on the old and the new in chemistry, Professor Rosenthal of Erlangen on Lavoisier, and what he did for the advancement of our views of the life processes; Professor Engler of Karlsruhe on petroleum; and there will be a banquet in the afternoon in the Park House. On the 18th there will be sectional meetings, visits of inspection, excursions, and a ball in the rooms of the Artists' Club in the evening. On the 19th Professor Winkler of Freiberg, in Saxony, will discuss the question of the nature of the chemical elements; Dr. Warburg will describe what he saw on his journeys in Southern and Eastern Asia; Dr. Rode of Norderney will speak of the children's hospital on that island. The Sections will sit in the afternoon; and the members will meet in a free-and-easy style in the Rathskeller (one of the most celebrated places of refreshment in Germany) in the evening. On the 20th the members will make excursions by land and sea to Bremerhaven, Lylt, and Norderney. Members of the Congress are urgently advised to communicate their wishes as regards lodgings to the President of the Lodging and Reception Office, Herr Hermann Frese, Ansgariikirchhof, 1, Bremen, as soon as possible.

Berlin, August 26th.

Obituary.

SAMUEL BROWNE, M.K.Q.C.P.I., M.R.C.S., J.P., R.N.

TWO weeks ago we had to chronicle the decease of one of the most distinguished physicians of Belfast—Dr. J. W. T. Smith. To-day we announce, with deep regret, the death of one of the ablest surgeons—Mr. Samuel Browne,—which took place at his residence, Lindisfarne, Strandtown, Belfast, on Aug. 26th, at the advanced age of eighty-one years. The deceased was the son of the Rev. Solomon Browne, Presbyterian minister of Castledawson, county Derry, and nephew of the late well-known Rev. Dr. John Browne, of Aghadowey. Educated at Dublin, Glasgow, and London, he became a Member of the Royal College of Surgeons of England in 1851, a Licentiate of the King and Queen's College of Physicians in 1859, and a Member in 1881. After retiring from the Royal Navy, in which he was a Staff Surgeon, Mr. Browne began practice in Belfast about fifty years ago. At first he was surgeon to the General Dispensary and afterwards to the Royal Hospital (or, as it was then styled, the General Hospital). From this he retired several years ago, when his son joined the staff, and he has since been consulting surgeon. Mr. Browne took a special interest in ophthalmic surgery, and it was through his energy that the first special hospital in Belfast was established. This was the Ophthalmic, which was founded by him, as he stated, "in a modest way in Millfield" for the treatment of affections of the eye and ear. This institution has, through the kindness of the late Sir Wm. and Lady Johnston, developed into the large building, the Belfast Ophthalmic Hospital, of which Dr. J. Walton Browne is now senior surgeon. Mr. Browne was an enthusiast in the study of eye diseases, and contributed the following papers:—Popular Lectures on the Structure and Functions of the Human Eye (1852); a series of papers in the *Dublin Quarterly*, including Complete Paralysis of the Motores oculorum from Tumour of the Crura Cerebri (1849); several cases of Extirpation and Excision of the Eye for Cancer, Melanosis, &c. (1851-8-9); and two papers on Cleft Palate to the same journal (1852-9). He was consulting surgeon to the Belfast Hospital for Sick Children, and the most important and valuable of his appointments—medical superintendent for the Belfast Borough, consulting surgeon and medical officer of health for the Belfast Union and Borough—he retained up to the time of his death. He was also an ex-President of the Belfast Pathological and Medical Society (now united as the Ulster Medical Society). Mr. Browne took a very active part in municipal affairs. He was for a long period a town councillor, as well as a Justice of the Peace, and in the year 1870 he was elected Mayor of Belfast. Mr. Browne was married to Miss Walton, sister of the late Mr. Haynes Walton, F.R.C.S., of London. He leaves behind him one daughter and two sons. The elder Dr. John Walton Browne is now senior surgeon to the Royal Hospital and to the Belfast Ophthalmic Hospital, while the younger, Dr. Samuel Browne (who was for a time in the Royal Navy), is now medical officer to Her Majesty's Prison, Warwick, and medical officer of health for Leamington and Warwick. For some time past Mr. Browne had been in failing health; this year he tried a change, and visited some of the health resorts in England, but returned home about a month ago feeling no better. He was obliged to take to bed, and gradually became weaker, and died from advancing old age. For the past half-century Mr. Browne was a highly honoured and respected member of the medical profession in Belfast. As a surgeon, and especially as an ophthalmologist, his opinion was eagerly sought for by the public. No man was more courteous, more obliging, or more honourable than Mr. Samuel Browne. He was attended in his illness by his brother, Dr. John Browne (Dundalk), by his son, Dr. J. Walton Browne, and by his old friend, Professor Seaton Reid. His funeral was strictly private.

Medical News.

BRITISH MEDICAL SERVICE.—The following is a list of the successful candidates at the recent Competitive Examination for commissions in the Medical Staff of Her Majesty's Army:—

	Marks.		Marks.
Powell, E. E.	3245	Ryan, R. P.	2925
Beach, T. B.	3240	Graham, W. Ap. S. J.	2920
Williams, E. McK.	3225	Shanahan, D. D.	2895
Jennings, J. W.	3190	Dickson, H. E. B.	2890
Carter, J. E.	3105	Buggy, L.	2880
Dowse, H. E.	3090	Pearse, A.	2880
Connor, J. C.	3025	Mason, H. D.	2875
Hardy, F. W.	2990	Clapham, J. T.	2855
Healey, C. W. R.	2945	D'Alton, C.	2850
Whitestone, C. W. H.	2940	Tate, G. W.	2825

INDIAN MEDICAL SERVICE.—The following is a list of the candidates for Her Majesty's Indian Medical Service who were successful at the Competitive Examination held on Aug. 11th and following days:—

	Marks.		Marks.
Crawford, J. M.	3450	Barber, H. R. C.	3210
Murray, F. E.	3350	Buist-Sparks, R. W. T.	3200
O'Kinealy, F.	3295	James, C. H.	3200
Singh, B. J.	3265	Whitcombe, E. G. R.	3200
Wolfe, J. W.	3240	Younger, H. J.	3180
Cassidy, C. C.	3220	Basu, B. D.	3150

Forty-nine candidates competed for twelve appointments; forty-seven were reported qualified.

SOCIETY OF APOTHECARIES OF LONDON.—The following candidates passed the examinations in the subjects indicated on Aug. 15th and 21st:—

Surgery.—F. W. A. Stott,* B.A., Oxford University and Manchester; R. W. Cooper,* St. Thomas's Hospital; A. B. Blomfield, London Hospital; W. A. Hampton, Middlesex Hospital; G. E. T. Haydon and R. Jackson, London Hospital; H. L. A. Keller, St. Thomas's Hospital; F. Lewis, St. Mary's Hospital; H. L. Morgan, Westminster Hospital; R. B. Morris, Owens Coll., Victoria University; C. E. Soulby, Middlesex Hospital; J. J. Waddelow, King's College; W. A. Powel, University College.

Medicine, Forensic Medicine, and Midwifery.—A. E. F. F. Huntsman,† St. Mary's Hospital; M. Royce, Royal Free Hospital; J. Hurson,† Queen's College, Belfast, and Sheffield; E. Boardman, Madras University and Royal Free Hospital; J. G. Burgess, Guy's Hospital; C. P. M. Swales,† St. Bartholomew's Hospital; C. E. Soulby,† Middlesex Hospital; A. J. Richards, Middlesex Hospital; D. R. P. Evans,† Liverpool and Charing-cross Hospital; W. A. Hampton,† Middlesex Hospital; C. T. W. Hirsch, London Hospital; J. J. Waddelow,† King's College; L. Trewby,† Royal Free Hospital; C. E. Cornwall and J. More, St. Bartholomew's Hospital; W. E. Passmore, Westminster Hospital.

Medicine and Forensic Medicine.—F. Lewis, St. Mary's Hospital; R. H. D. Mahon, St. Thomas's Hospital.

Medicine and Midwifery.—W. F. H. Newbery, M.D., C.M., Toronto; L. F. Dods, St. Bartholomew's Hospital.

* These candidates, having passed in Medicine and Midwifery, were granted the Diploma of the Society.

† These candidates, having passed in Surgery, were granted the Diploma of the Society.

HIPPOPHAGY IN BERLIN.—It is stated that, in compliance with the public wish, a horse-meat restaurant has been established at Berlin, wherein a large trade is carried on.

SMALL-POX EPIDEMIC.—A telegram received from Pernambuco states that 4000 cases of small-pox had occurred there, with an average of fifteen to twenty deaths a day.

STOCKTON HOSPITAL.—The annual meeting of the governors of this hospital took place on Tuesday last, when the committee submitted their report for the year ending June, 1890. During the past year 557 in-patients were received, while 1597 out patients were treated. The income was £5459 16*s.* 8*d.*, and the expenditure £1509 13*s.* 2*d.*, leaving a balance of nearly £4000. A new wing, now in course of erection, will be opened in a few weeks.

STRATFORD-ON-AVON HOSPITAL. — The Mayor (Mr. J. Archer) presided at the annual meeting held on Tuesday. The proceedings commenced with a presentation by the governors of a beautifully illuminated and framed address to Mr. C. R. Garnett, for valuable and gratuitous services rendered to the institution as honorary secretary until his resignation in February last, in consequence of ill-health. During the past year 210 in-patients were admitted, and 490 out-patients received treatment. The accounts of receipts and expenditure showed a balance in hand of £171 11*s.* 2*d.*

MURDER OF THREE PHYSICIANS.—According to a Dalziel's telegram from Madrid, dated the 27th inst., the physicians at work in cholera-infected districts continue to receive ill-usage from the peasants, who are opposed to the precautionary regulations upon which they insist. Notwithstanding that the physicians are provided with military escorts, they are still subjected to violence. In Valencia a physician has been killed by a stab in the back; at Mogente another doctor had his head split in two by a hatchet wielded by a woman; while a third was set upon and killed by an infuriated mob near Lerdo.

PRESENTATION TO MAJOR PROBYN.—A testimonial consisting of a service of plate in solid silver, representing a value of £300, was presented on the 16th inst. to Major Clifford Probyn of the London County Council, by friends and constituents of the Strand Division, City of Westminster. Major Probyn is a manufacturing and operative chemist. He has taken a deep interest in all matters appertaining to sanitary science, notably in connexion with the question of the purity and quantity of the metropolitan water-supply. As a member of the London County Council he has taken an active part in the better housing of the poor, particularly in the sanitary arrangements connected therewith. Whilst representing the Strand Division of the London School Board he effected considerable improvements in the sanitation, ventilation, &c., of the schools.

OPHTHALMIA IN SCHOOLS.—On the 18th inst., at a meeting of the members of the Central London School District Board, Dr. S. Stephenson presented an important report on the condition of the children suffering from ophthalmia. The present number of boys, girls, and infants was 250. The progress of the children in the isolation school, though slow, was satisfactory. He reported an encouraging freedom from relapses which have been the bane of the old school. With regard to the children of the school itself he was not able to report satisfactorily. At present the school buildings acted as a forcing-house for ophthalmic cases, in consequence of the predisposed state of the eyelids of the children, of which there was a large number. Touching the ophthalmic staff, he stated that it would become necessary for the board to overhaul and reconstruct the entire nursing arrangements. The report was referred to the committee.

WRITTEN QUESTIONS AT THE RECENT COMPETITIVE EXAMINATION OF CANDIDATES FOR HER MAJESTY'S ARMY AND INDIAN MEDICAL SERVICES.

MEDICINE.—SIR WILLIAM AITKEN.

1. Case cited for commentary and critical analysis.—2. What are the causes of tumour of the abdomen dependent on the position and condition of the liver? By what signs would you recognise the existence of hepatic tumour? If a nodule or nodules are felt on the surface of the liver, to what morbid conditions may they be due; and how would you differentiate these conditions from each other? Explain the pathology of impediment to the flow of blood through the liver, and describe the symptoms to which it may give rise.—3. Explain the meaning of vaccination. Describe its purpose as applied to the human race; mention how, where, and by whom it came to be so employed. Explain what is meant by primary vaccination, and what by secondary vaccination or revaccination, and describe the regular phenomena which follow each of these operations. Also describe the appearance of a perfect vaccine vesicle, and of the scar or mark which is typical of a genuine vaccination; explain the pathology of these characteristic appearances. Explain, further, the *rationale* of arm-to-arm vaccination. State the limits of age at which primary vaccination is required by law to be performed, and explain the means required to secure its success.—4. Describe a case of measles, and indicate its complications, sequelæ, and treatment.—5. Name the officinal compounds or preparations containing arsenious acid, with the strength or proportion of arsenic in each and the doses of each preparation. What are the symptoms which follow the use of arsenic in long-continued or excessive doses? Name the antidotes to arsenical poisoning, and the incompatible medicinal preparations which may not be prescribed with arsenic.

CHEMISTRY.—DR. ALLMAN.

1. Three volumes of hydrogen combine with one of nitrogen to form ammonia. How many volumes of ammonia are the result?—2. Write down the equation which expresses the reactions occurring in the treatment of potassium cyanide with hydrochloric acid.—3. Give the formulæ which express the chemical composition of the following substances:—Calomel, corrosive sublimate, sulphuretted hydrogen, and cyanogen.

ANATOMY AND PHYSIOLOGY.—SIR JOSEPH FAYRER.

1. Describe the ulna, and give an account of the origin and insertion of the muscles arising from or inserted in it. Describe also the anatomy of the elbow-joint.—2. Describe the distribution and anatomical relations of the arteries and their branches which supply the foot with blood.—3. Describe the minute structure of a liver lobule, and how the elements of which it is composed are anatomically related to each other. Give an account also of the functions of the liver, and state the composition of bile.—4. Describe the corpora striata and optic thalami, giving, as far as you can, an account of their functions.—5. Describe the parts and their anatomical relations which enter into the formation of a femoral hernia.

SURGERY.—MR. POLLOCK.

1. What are the most frequent causes of aneurysm? By what symptoms may a popliteal aneurysm be diagnosed from any other tumour in the immediate neighbourhood of the knee-joint? What treatment should be adopted for the obliteration of the aneurysm, and what are the evils which may follow on the treatment pursued?—2. What are the early symptoms indicative of enlargement of the prostate gland? Describe the effects of such enlargement on the urinary tract if treatment be neglected, and what measures should be adopted for the relief of the patient.—3. What are the usual characteristics, external and internal, of congenital tumours (nævi being excluded), and what treatment should be adopted under their various conditions?—4. A patient is the subject of an abscess pointing at the margin of the rectum. What should be the treatment in the first instance? What will be the most probable course of the case, and the ultimate measures which may be required for its permanent relief?—5. Describe the different dislocations to which the shoulder-joint is liable, the symptoms by which each form may be diagnosed, and the methods of reduction.—6. Describe the early indications and commencement of a case of senile gangrene, and the treatment to be adopted in its various stages. In what respect does the character of the gangrene associated with diabetes differ generally from other forms of gangrene?

NATURAL SCIENCE.—DR. ALLMAN.

Zoology.—1. What are the orders included under the non-placental mammals? Give their geographical distribution.—2. What is the notochord? Mention an instance of its persistence.—3. Refer to its proper sub-kingdom, class, and order each of the following animals:—*Lepas* (barnacle), *Loligo* (cuttlefish), *Buccinum* (whelk), *Scorpio* (scorpion), *Triton* (water newt).

Botany.—4. What is a syncarpous and what is an apocarpous ovary? Give one or more examples of each.—5. Enumerate from without inwards the verticils of a complete flower, and give examples of cases in which one or more of these verticils has been suppressed.—6. Refer to its natural order a plant with the following characters, and give one or more examples:—Leaves alternate, without stipules. Inflorescence without bracts. Calyx with four deciduous sepals. Corolea with four regular petals. Stamens six, two of these shorter than the others. Fruit a pod divided into two cells by a membranous partition which unites the two marginal placentæ. Seeds without albumen. Embryo with the cotyledons folded on the radicle.

Physics.—7. What is the nature of electric induction?—8. An electric current is made to pass through a copper wire above and parallel to the length of a horizontally suspended magnetic needle. What is the effect of the current on the needle?—9. Explain the formation of dew.

METROPOLITAN ASYLUMS BOARD.

Return of Patients remaining in the several Fever Hospitals of the Board at midnight on August 26th, 1890.

Hospital.	Beds occupied.						Total accommodation.
	Scarlet fever.	Diphtheria.	Typhus fever.	Enteric fever.	Other diseases.	Total.	
Eastern Hospital	285	45	..	40	3	373	442
North-Western Hospital	270	39	..	11	1	312	415
Western ,,	109	10	..	9	1	129	262
South-Western ,,	157	..	..	..	1	158	340
South-Eastern ,,	193*	22	3	23	3	244	462
Northern ,,	399	24	..	..	..	423	480
Totals	1413	131	3	88	9	1639	2401

SMALL-POX.—*Atlas* hospital ship, 1.

* 1 infant with mother.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ADKINS, A. J., L.R.C.P., M.R.C.S., has been reappointed Clinical Assistant in the Skin Department of St. Thomas's Hospital.

ASHTON, ALBERT, M.B.Vict., B.Ch., has been appointed House Surgeon to the Manchester Royal Infirmary.

BOOTH, J. MACKENZIE, M.A., M.D., C.M., has been appointed Interim Assistant Surgeon to the Aberdeen Royal Infirmary.

BRISTOW, G. H., L.R.C.P., M.R.C.S., has been appointed Clinical Assistant for Diseases of the Ear to St. Thomas's Hospital.

CARTER, W. R., B.A. Cantab., L.R.C.P., M.R.C.S., has been appointed Senior Obstetric Clerk to St. Thomas's Hospital.

COOMBE, ETHELBERT E. S., M.B. Durh., has been appointed a Public Vaccinator in South Australia.

COOPER, H. J., M.A., M.B., B.C. Cantab., L.R.C.P., M.R.C.S., has been appointed Assistant House Physician to St. Thomas's Hospital.

CUMMING, WM., M.D.Edin., has been appointed Government Medical Officer at Barcaldine, Queensland.

DAUBER, J. H., B.A. Oxon, M.R.C.S., L.R.C.P., L.S.A., has been appointed Surgical Registrar to the National Orthopædic Hospital.

DEWHURST, J. H., M.A., M.B., B.C. Cantab., L.R.C.P., M.R.C.S., has been appointed House Surgeon to St. Thomas's Hospital.

DUKES, T. A., L.R.C.P., M.R.C.S., has been appointed Resident House Physician to St. Thomas's Hospital.

EDWARDS, J. HAMMERTON, M.A., M.D. Cantab., M.R.C.S., L.R.C.P. Lond., has been appointed Medical Officer to the Camberwell Provident Dispensary.

FARQUHARSON, Jas., M.D., C.M. Aberd., F.F.P.S. Glasg., has been appointed Medical Officer for the Poorhouse, Old Monkland.

FAZAN, CHAS. H., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Wadhurst District of the Ticehurst Union, vice White, resigned.

FINDLATER, A., M.D. Dub., has been appointed Medical Officer to the Hendon School.

FINLAY, DAVID W., M.D., C.M. Glasg., L.R.C.P. Lond., has been appointed Medical Officer of Health for the Harrow Urban Sanitary District of the Hendon Union.

GERVIS, H., M.A., M.B., B.C. Cantab., L.R.C.P., M.R.C.S., has been appointed Resident Accoucheur to St. Thomas's Hospital.

GRAVELY, HARRY, M.R.C.S., has been appointed Medical Officer for the Maresfield District of the Uckfield Union, vice Trentler, resigned.

LANKESTER, A. C., L.R.C.P., M.R.C.S., has been appointed House Surgeon to St. Thomas's Hospital.

LOMAS, ERNEST C., M.B., Ch.B. Vict., M.R.C.S., has been appointed Resident Medical Officer to the Barnes Convalescent Hospital, Cheadle.

LOW, H., M.A., M.B., B.C. Cantab., L.R.C.P., M.R.C.S., has been reappointed Clinical Assistant in the Skin Department of St. Thomas's Hospital.

MILLER, ALEX. C., M.D. Edin., has been appointed Parochial Medical Officer for Kilmallie, Fort William, vice Macintvre, deceased.

MONSELL, FREDK. W., L.K.Q.C.P., L.R.C.S. Irel., has been appointed a Public Vaccinator in South Australia.

PEACOCK, EDWIN, M.R.C.S., has been reappointed Medical Officer of Health for Nuneaton, Chilvers Coton, and Bulkington.

SANDERSON, CHAS., L.R.C.P. Edin., L.F.P.S. Glasg., has been reappointed Medical Officer of Health, Hastings.

SHEARER, D. F., B.A., B.M., B.Ch. Oxon., has been appointed Clinical Assistant in the Throat Department of St. Thomas's Hospital.

STABB, A. F., L.R.C.P., M.R.C.S., has been appointed House Surgeon to St. Thomas's Hospital.

STABB, W. WILKING, B.A., M.B., B.C. Cantab., has been reappointed Resident House Physician to St. Thomas's Hospital.

STOKES, W. G. G., B.A., M.B., B.C. Cantab., L.R.C.P., M.R.C.S., has been appointed Assistant House Surgeon to St. Thomas's Hospital.

SUTTON, FRANCIS, has been reappointed County Analyst for Norfolk.

THEED, STANLEY V., M.R.C.S., has been appointed Medical Officer of Health for the Shire of Mornington, West Riding, Victoria, vice Hooper, resigned.

THORNTON, PHILIP, M.R.C.P. Edin., M.R.C.S., has been appointed a Surgeon in the Queensland Defence Force.

TOLLER, S. G., L.R.C.P., M.R.C.S., has been appointed Assistant House Surgeon to St. Thomas's Hospital.

TUDHOPE, A. P., M.B., C.M. Glasg., L.R.C.S. Edin., has been appointed Parochial Medical Officer for the Eastern District of Old Monkland.

VEREKER, RICHD. H., L.K.Q.C.P., L.R.C.S. Irel., has been appointed Medical Officer for the Third A and B District of the Langport Union.

WARE, E. E., L.R.C.P., M.R.C.S., has been appointed House Surgeon to St. Thomas's Hospital.

WICKHAM, G. H., B.A., M.B., B.C. Cantab., L.R.C.P., M.R.C.S., has been appointed Non-resident House Physician to St. Thomas's Hospital.

YOUNG, E. H., M.D. Durh., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Okehampton Rural District, vice Snell, resigned.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement.

BRADFORD CHILDREN'S HOSPITAL.—House Surgeon. Salary £80 per annum, with board, residence, and washing.

CHELSEA, BROMPTON, AND BELGRAVE DISPENSARY, 41, Sloane-square, S.W.—House Surgeon and Secretary. Salary £95 per annum, with furnished rooms in the Dispensary house, and an allowance of £20 for coals and candles for the use of the institution.

CRICHTON ROYAL INSTITUTION, Dumfries.—Junior Medical Assistant. Salary £100 per annum. (Apply to the Medical Superintendent.)

LONDON SCHOOL OF GYNÆCOLOGY, Soho-square, London.—Clinical Assistants in both Out- and In-patient Departments.

NATIONAL DENTAL HOSPITAL, 149, Great Portland-street, W.—House Surgeon.

NORTH-WEST LONDON HOSPITAL, Kentish-town-road.—Assistant Physician.

OWENS COLLEGE, Manchester.—Junior Demonstratorship in Physiology and Histology. Salary £100 per annum.

QUEEN'S COLLEGE, Birmingham.—Tutor in Midwifery and Gynæcology.

ROYAL ALBERT EDWARD INFIRMARY, Wigan.—Junior House Surgeon. Salary £80 per annum, with apartments and rations, exclusive of wines, spirits, and washing.

SALFORD ROYAL HOSPITAL.—House Surgeon. Salary £100 per annum with board and residence. The present Junior House Surgeon is a candidate, and in the event of his being appointed, there will be a vacancy in that post. Salary £50 per annum, with board and residence.

ST. PETER'S HOSPITAL FOR STONE AND URINARY DISEASES, Henrietta-street, Covent-garden.—House Surgeon for six months. Honorarium 25 guineas, with board, lodging, and washing.

SUFFOLK GENERAL HOSPITAL, Bury St. Edmunds.—House Surgeon. Salary £80, with board, lodging, and washing.

TAUNTON AND SOMERSET HOSPITAL.—House Surgeon. Salary £100 per annum, with board, lodging, and washing in the Hospital. (Apply to the Secretary, 13, Hammet-street, Taunton.)

WALSALL AMALGAMATED FRIENDLY SOCIETIES' MEDICAL ASSOCIATION.—Resident Medical Officer. Salary £200 per annum, with unfurnished residence. All drugs, cab and tram fares paid for by the Association. (Apply to the Secretary, 61, William-street, Walsall.)

WESTERN GENERAL DISPENSARY, Marylebone-road, N.W. — Junior House Surgeon. Salary £50 per annum, with board and residence.

WORCESTER COUNTY AND CITY LUNATIC ASYLUM.—A Third Assistant Medical Officer. Salary £100 per annum, with board, lodging, and washing.

Births, Marriages, and Deaths.

BIRTHS.

BENNETT.—On Aug. 12th, at Wiesbaden, Germany, the wife of Brigade Surgeon J. Bennett, Bengal Medical Service, of a son.

CROOKSHANK.—On Aug. 21st, at The Yews, Eastbourne, the wife of Edgar M. Crookshank, M.B., of a son.

GRENFELL.—On Aug. 26th, at Southend, the wife of Henry Osborne Grenfell, Surgeon, prematurely, of a son.

HARE.—On Aug. 16th, at Weston-park, Crouch-end, N., the wife of Evan H. Hare, M.A., F.R.C.S., of a son.

MACKAY.—On Aug. 23rd, at Northumberland-place, North Shields, Northumberland, the wife of W. Murray Mackay, L.R.C.P., L.R.C.S., L.F.P.S.G., of a son.

MALDEN.—On Aug. 20th, at Pembury, Tunbridge Wells, the wife of Walter Malden, M.A., M.B., of a son.

MARRIAGES.

ALLEN—BULLING.—On Aug. 26th, at St. Matthew's, Oakley-square, London, Dr. J. T. Wheeler Allen, of Dublin, second son of Dr. C. Antisell Allen, of Dublin, to Ellen Viner (Nellie), younger daughter of William Bulling, of Camden-street, N.W.

WILSON—BLACKETT.—On Aug. 21st, at St. Andrew's Church, Aberdeen, by the Rev. J. M. Danson, M.A., Incumbent, assisted by the Rev. William Walker, LL.D., Monymusk, and the Rev. Robert Mackay, M.A., St. John's, Longside, James Wilson, M.D., Shepherd's Bush, London, to Aurora Kate, eldest daughter of James Blackett, Ceylon.

DEATHS.

BANKS.—On Aug. 21st, aged 14, Frederick Mitchell, elder son of William Mitchell Banks, M.D., F.R.C.S., of Liverpool.

DALTON.—On Aug. 21st, at the residence of his son-in-law, Bury St. Edmunds, Rowland Dalton, M.R.C.S., in his 90th year.

HARDIE.—On Aug. 26th, at Wrenwood, Higher Broughton, Manchester, James, son of James Hardie, F.R.C.S., aged 26.

HUNTER.—On Aug. 23rd, at Argyll-street, Lochgilphead, Argyleshire, John Hunter, L.R.C.S. Edin., aged 68.

PRINCE.—On Aug. 26th, at Dorking, Thomas Prince, M.R.C.S., of Dorking, and of Balsham, Cambridgeshire, in his 81st year.

IN MEMORIAM.

WAKLEY.—On Aug. 30th, 1886, at Heathlands-park, Longcross, Chertsey, Surrey, James Goodchild Wakley, M.D., for twenty-five years Editor of THE LANCET, youngest son of the late Thos. Wakley, M.P.

CORRECTION.

BY a regrettable error, attributable to the carelessness of one of our clerks in transferring from a newspaper forwarded to us an announcement of the death of a member of the profession, the name of Dr. G. S. Keith was included in our obituary column on the 16th inst. We are glad to learn that Dr. G. S. Keith is in full possession of his wonted health, and trust that the unfortunate mistake will not have resulted in any serious inconvenience to Dr. Keith or his friends.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Aug. 28th, 1890.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Aug. 22	30·10	W.	60	55	114	71	54	·04	Bright
,, 23	29·72	S.W.	62	60	100	70	59	·01	Cloudy
,, 24	29·75	N.W.	57	52	106	68	48	·20	Cloudy
,, 25	29·68	S.W.	55	51	111	68	46	·05	Cloudy
,, 26	29·51	S.W.	57	53	109	63	50	·05	Cloudy
,, 27	29·44	S.W.	57	53	101	66	51	·11	Overcast
,, 28	29·72	W.	57	54	109	67	50	·12	Bright

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET to be addressed "To the Publisher."

We cannot undertake to return MSS. not used.

UNREGISTERED DENTISTS AND ANÆSTHETISTS.

WE are asked by correspondents from time to time whether it is in accordance with professional etiquette for a member of the medical profession to give chloroform for a dentist who is not registered. It is more than a breach of professional etiquette—it is a moral wrong to the public. An unregistered dentist is one who has no right to the title "Dentist," and can be fined for using it or representing in any way that he is a dentist; and such men are finding this out to their cost, thanks to the British Dental Association. Would our correspondents who ask us this question care to give an anæsthetic for an unqualified man who was a bone-setter, or be called in consultation with a herbalist or a prescribing chemist? It seems hard in these days of keen competition to have to refuse when you feel pretty confident that some other less scrupulous practitioner will reap the benefit; but it is some comfort to know that these unregistered practitioners of dentistry will soon be wiped out and a thing of the past.

M.D. (Brighton).—We do not think anything would be gained by prolonging the controversy.

Gamma.—A. is entitled to an explanation from B.

FEES FOR DETAINING PAUPER LUNATICS.

To the Editors of THE LANCET.

SIRS,—Will any of your numerous readers answer me the following questions? 1. What fee is usually given? 2. The names of the unions where the fee has been decided upon. 3. Is a medical officer of a workhouse (who receives fees for certificates of removal to asylum) entitled to a fee? 4. If so, what fee has been given, and by what unions?

I am, Sirs, yours faithfully,

Aug. 25th, 1890. UNION MEDICAL OFFICER.

*** Under Section 24 of the Lunacy Act, 1890, no provision seems to be made for the payment of a fee for certificate for detaining lunatics in a workhouse for a period not exceeding fourteen days. If further detention of a lunatic is required, only the outside medical officer certifying is entitled to a fee, which is payable by the guardians. The Council of the Poor-Law Medical Officers' Association suggested the minimum sum to be 10s. 6d., though in one London district a medical officer has contracted to certify in all such cases for 5s. a case.—ED. L.

Dr. Smythe (Lewes).—The address of the agents for the sale of the battery is as follows: Messrs. Suter and Co., 276, Strand, London.

LEPROSY AND VACCINATION.

IN reference to the statement of Dr. Beaven Rake, quoted in THE LANCET of the 16th inst., to the effect that "only one practitioner out of thirty or more in Trinidad gave an affirmative answer to Archdeacon Wright's query as to the transmission of leprosy by vaccination," the latter gentleman, in a letter to us, quotes the testimony of several writers in opposition to the opinion expressed by the twenty-nine practitioners. Amongst the writers referred to is Dr. Munro, long in charge of the Leper Asylum of St. Kitts, who says: "I am decidedly of opinion that by careless vaccination, bloody matter being taken with the vaccine lymph, leprosy can and most certainly would be propagated." Dr. Arning's authority is also cited, who remarks: "The fact of the rapid spread of leprosy over the Hawaiian islands after the introduction of very general, and I may say very careless, vaccination can never be overlooked." Dr. John D. Hills, formerly Medical Superintendent of the Leper Asylum, Mahaica, says, in a letter to Archdeacon Wright: "I have already given some cases in which there could be no reasonable doubt that the disease was produced by vaccination with tainted lymph." The Archdeacon also quotes passages from the writings of Dr. J. Bechtinger of St. Thomas, and Dr. Leloir, author of "Traité pratique et théorique de la Lèpre," to a similar effect.

Dr. Lewins.—To argue that organic substance differs from inorganic in degree only, not in kind, is surely a wild exercise of the reasoning faculty. To maintain such a position it would be requisite, *in limine*, to find another word to do duty for that of "sub-stance." Then, again, it would have to be proved that inorganic matter possesses the germ of intelligence which characterises the higher forms of organisms. But these dialectic subtleties do not come strictly within the province of THE LANCET, and we must decline to open our columns to their discussion.

M.R.C.S. submits the following questions:—Have the ovaries ever been removed for the cure of melancholia? Has a successful result ever been secured?

Mr. Harrison Cripps.—We shall be pleased to receive the paper.

TWINS—ONE A MONSTROSITY.

To the Editors of THE LANCET.

SIRS,—I should like to ask through the medium of your columns if cases such as the following are at all common in the experience of practitioners with much midwifery practice.

While on holiday and relieving a professional friend for a few days, I was called on Sunday morning to a confinement. When I arrived I found one child born and the cord tied. Another child had just been expelled. The head was fully formed and all the features correct. The body, which seemed to be more abdomen than chest, was about an inch and a half long, and had a large expansion terminating in the umbilical cord. From a position partly between the shoulder and the hip on each side projections arose, which resembled arms in the upper part with the elbow. One had a hand fully formed, while the other had what appeared more like an imperfectly developed foot. The child did not respire.

I have never yet seen an instance where one of twins was a monstrosity, nor have I heard of such experience from any other practitioner.

I am, Sirs, yours faithfully,

Portsmouth, Aug. 25th, 1890. J. ALBERT GIBSON, M.B.

THE PREDETERMINATION OF THE SEX OF OFFSPRING.

HERR G. HERZ, in a contribution to the German archives of scientific and practical veterinary surgery on the possibility of predetermining the sex, gives an elaborate review of the numerous theories of the sexual differentiation, from which it appears that we are still entirely ignorant of the cause of such difference. He enlarges on the theory of Fiquet, which is also favoured by his own experiments. Mr. Fiquet, a cattle farmer at Houston in Texas, had observed that the sex of the young was usually that of the weaker parent. He produced for experimental purposes a marked parental difference by a certain system of keeping and feeding his cattle. If he wanted a bull calf he gave the cow plenty of particularly nourishing fodder, while the bull was given far less fodder, and that of inferior quality, and was made to serve the largest possible number of cows. If, on the contrary, he wanted to produce heifers, he fed the bull well and allowed him no chance of serving other cows but those on which he wanted to experiment, and which were kept on poor fodder. Mr. Fiquet says that he was successful in thirty-two cases, and Herr Herz verified the theory by experiments of his own on goats, which gave the same results as Mr. Fiquet's experiments on cattle.

Professor W. Gray (Bombay).—The paper will be welcomed if of moderate length.

Cyclops has not enclosed his card.

RELIGIOUS QUALIFICATIONS FOR MEDICAL APPOINTMENTS.

THE Belgian medical papers are very indignant with the Minister of Railways because he declared recently, in answer to a question in the House of Parliament in reference to an appointment he had made to a railway surgeoncy, that the members of the Government would certainly give the preference in appointments of this kind to gentlemen in whose religious views they had confidence—that is to say, they would appoint "Catholics" rather than "Liberals." In the case in point it seems that the gentleman appointed in preference to a highly qualified candidate was not even a Belgian, but a Luxemburger.

Anti-humbug.—1. The title "Physician" is unwarrantable. Legal proceedings would be well left to the Colleges of Physicians, which should guard their title.—2. The arrangements look very like "covering," but details of cases would have to be given. The penalty of covering in several cases has been removal of the name of the coverer from the Register.—3. The cost need not be much. The facts require statement and proof before the Medical Council. It would be invidious for one practitioner to be the prosecutor or promoter of such proceedings.

Mr. J. Smith.—Yes, the report of the Departmental Committee appointed to consider the suggestions made for improving the scope of the next census was laid on the table of the House of Commons in June last.

G. P.—The question is discussed at some length in our present number.

THE COURTESIES OF NOTIFICATION.

To the Editors of THE LANCET.

SIRS,—Your remarks on the above subject in your issue of Aug. 16th have been forcibly and unpleasantly brought to my mind during the last few days. I was called to see a woman who was taken suddenly ill on the 22nd. I diagnosed scarlatina, and sent a certificate to that effect by a messenger to the medical officer of health for the district; a copy of the certificate was returned to my servant, with directions to take it to the house of the patient. Rather unusual, I thought, to make use of my servant in this way without my permission. I heard nothing further until the 25th, when a little girl brought the copy of the certificate to my surgery with the remark, "The nurse had left it to be taken to the doctor who had given it." By the dirty appearance of the certificate, the note at the back—"This patient is in my opinion suffering from measles, and is therefore unfit for admission to this hospital. —— ——, A.M.O."—may or could have been read by a number of persons. I think, even if I were wrong in the diagnosis, the returned certificate might have been enclosed in an envelope, though why they send it back at all I am at a loss to understand. If it were necessary, why not have sent it direct to me? Might I ask if the A.M.O. is acting with ordinary courtesy in correcting (?) my diagnosis in this public manner? Enclosed is the copy of certificate. I am, Sirs, yours faithfully,

August 25th, 1890. F. R. L.

*** The diagnosis in this case seems to have been one of some difficulty. There is a certain redness of the throat in some cases of measles. Dr. Goodhart, speaking of the prodromal stage, says: "The palate should now be carefully examined, and not infrequently the roof of the mouth, behind the hard palate, may be seen covered with a sharply defined red blush, with a number of minute red papules upon it." The diagnosis turns chiefly upon coryzal symptoms and a more gradual onset of the attack in measles, with often a history of exposure. As to the courtesies of the question, we agree with our correspondent. The servant of a medical man notifying is not the messenger of the sanitary authority, especially to an infected house; and when the notifier has to be communicated with, especially in the way of expressing dissent from his diagnosis, it should be directly, and with every sentiment of consideration.—ED. L.

THE MORTALITY IN EUROPEAN ARMIES.

ACCORDING to the "Archives de Médecine Militaire," the German army has the lowest death-rate, 3·97 per 1000, while the Spanish has the highest, 13·40 per 1000. Next after Germany comes Belgium, with a mortality of 4·7; then Great Britain, with 5·13; then France, with 6·06; then Austria-Hungary, with 6·94; then Italy, with 7·74; and, finally, Russia, whose 8·88 brings her next (though *longo intervallo*) to Spain. The most prevalent malady—pulmonary tuberculosis—counts more patients in the German army, however, than in the French, the figures being 3·12 for the former, as against 2·6 for the latter; though, on the other hand, the actual deaths from it are fewer in the German than in the Belgian or French army, the proportion being respectively 0·83, 1, and 1·11 per 1000.

Blue-Green.—Our correspondent should communicate with the body or bodies whose qualifications the party to whom he refers may hold.

An Enquirer will probably find the required information in our advertising columns.

HOSPITAL FIRE BRIGADES.

A FIRE occurred a day or two since in the laundry attached to St. Andrew's Hospital, Northampton. Fortunately, a well-drilled hospital fire brigade exists here, with a good equipment of fire apparatus. Mr. Arkell is captain of the brigade and hospital steward, and he rallied his brigade with so much promptitude that by a skilful manipulation of the hydrants and hoses they extinguished the fire without much loss. This system of private fire brigades has been greatly extended by Messrs. Merryweather and Sons of late, not only to hospitals, medical schools, infirmaries, &c., but to establishments even where the fair sex predominates.

Sanitarian is referred to a notice on page 324 of our issue of Aug. 9th.

ERRATUM.—By a printer's error, Mr. Oscar Jacobsen was described last week, p. 395, as "F.R.C.P.Lond., M.R.C.S.Eng." It should have been L.R.C.P.Lond., M.R.C.S.Eng.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Silk, London; Dr. Sutton, Sittingbourne; Dr. Smythe, Lewes; Mr. Lennox Browne, London; Mr. F. Corner, London; Mr. C. Wills; Dr. Mackay, Hornby; Dr. Colgate, Eastbourne; Dr. Peregrine, London; Dr. E. Blake, London; Mr. R. S. Young, Kimberley; M. Bourneville, Paris; Dr. G. Macdonald, London; Mr. Richardson, Newhaven; Mr. Lawson Tait, Birmingham; Dr. F. Simms, London; Messrs. Ballantyne and Co., London; Brigade-Surgeon W. Gray, Bombay; Messrs. Maythorn and Son, Biggleswade; Dr. Jenkins, Whifflet; Messrs. Boubert and Co., Paris; Dr. A. Harries, London; Herr J. Safar; Mr. Tobias, Bury St. Edmunds; Dr. W. P. G. Graham, Cairo; Messrs. Maclehose and Sons, Glasgow; Dr. Angel Money; Messrs. Sampson Low, Marston, and Co., London; Mr. Biddle, Kingston; Dr. Drysdale, London; Mr. H. Lane, Bath; Dr. W. J. Collins, London; Dr. W. Squire; Mr. H. P. Wright, Greatham; Dr. H. H. Fisher, Kettering; Dr. S. J. Taylor, Norwich; Mr. W. A. Lane, London; Mr. Parkinson, Ennis; Mr. F. Edge, Manchester; Mr. G. S. Keith, Edinburgh; Mr. G. F. A. Harris, Simla; Dr. Mackintosh, Chesterfield; Mr. N. E. Yorke-Davies, Sherborne; Dr. Bullock, Leamington; Dr. Raye, Winchester; Mr. Bond, Nantwich; Mr. Maccall, Morecambe; Mr. Rudolf, London; Dr. G. Fleming, St. John; Mr. A. Webster, Waterhouse; Mrs. Jones, Aberystwith; Dr. Wiglesworth, Rainhill; Mr. Albiston, Leeds; Dr. R. Dawson, London; Mr. Pendland, Coventry; Mr. Davies, Newport, Mon.; Mr. J. Macready, London; Mr. Galt, Lymington; Mr. Burke, Wolverhampton; Mr. Baker, Wolverhampton; Mr. Windle, Birmingham; Mr. Browne, London; Mr. Watson, London; Dr. Sainsbury, London; Mr. Aveling, London; Mr. Booth, Aberdeen; Mr. Walter Scott, Felling; Mr. Cresswell, Glamorgan; Messrs. Hopkinson and Co., Nottingham; Mr. Macpherson, Middlesbrough; Messrs. Oliver and Boyd, Edinburgh; Mr. Merryweather, Yorks; Mr. Bourke, Herne Bay; Mr. Paul, Liverpool; Mr. Flather, Cambridge; Messrs. Keith and Co., Edinburgh; Mr. McNidder, Manston; Messrs. Cassell and Co., London; Mr. Lawrence-Hamilton, London; Messrs. Street and Co., London; Dr. W. B. Ransome, Nottingham; Messrs. James and Co., London; Dr. Cooke, Worcester; Dr. Lewins, London; Dr. J. A. Gibson, Edinburgh; Mr. Lamond, Glasgow; Surgeon-General Tuson, London; Mr. Wilkes, London; Mr. Woodcock, Bradford; Herr L. Voss, Hamburg; Mr. Hilliard, Aylesbury; Messrs. Haigh, Son, and Co., Liverpool; Messrs. Johnson, Edinburgh; Messrs. Griffin and Co., London; Mr. Wills, Notts; Miss Hole, London; Messrs. Potter and Sacker, London; Dr. Rutherford, Dumfries; Messrs. Blondeau et Cie., London; Dr. Anningson, Cambridge; Mr. Kimpton, Nottinghill; Mr. Coleman, Dublin; Mr. G. H. Fuller, London; Mr. Knox-Bond, London; Mr. Hay, Salford; Mr. Hind, Hulme; Mr. Whitaker, Edinburgh; Mr. Brooks, Hull; Mr. Baxter, Wrexham; Mr. Cornish, Manchester; Mr. Pentland, Edinburgh; Mr. Hornibrook, London; Mr. Cottingham, London; Mr. W. A. Prince; Dr. Sajous, Philadelphia; Vallis, Bedford; M.B., Southport; An Enquirer; Lady Superintendent, Welbeck-street; Anti-humbug; Ajax, London; Nops Electrotype Agency, London; The Director-General of the Army Medical Department; M.R.C.S.; Dorset, London; F. R. L.; Union Medical Officer; L.R.C.P.Lond.; Gamma; C. E. M.; Pulsometer Engineering Co., London; S. A. B.; Blue-Green; J. M. F.

LETTERS, *each with enclosure,* **are also acknowledged from**—Dr. Spence, Burntwood; Mr. Crookshank, Eastbourne; Mr. Pollock, Tunbridge Wells; Mr. Routledge, Aberdeen; Mr. Gray, Exeter; Dr. J. Fletcher Little, London; Dr. Davies, Wolverhampton; Messrs. Woolley and Sons, Manchester; Miss Calvert, Manchester; Messrs. Goddard and Co., Nottingham; Mr. Tyte, Minchinhampton; Messrs. Burgoyne and Co., London; Mr. Barff, Salford; Messrs. Lacy, Hartland, and Co., London; Dr. Brown, Derby; Mr. Power, Fowey; Messrs. Lee and Nightingale, Liverpool; Mr. Kimberley Walsall; Mr. Wardle, Bishop Auckland; Miss Inman, Newark-on-Trent; Dr. Maclagen, Riding Mill-on-Tyne; Mr. H. C. Holden, Folkestone; Messrs. Bennett and Co., London; Mr. Fuller, Ruslem; Mr. McLeod; Messrs. Christy

and Co.; Mr. Stedman, Sevenoaks; Mr. Bishop, Bath; Mr. Beedell, Tiverton; Dr. Boys, St. Albans; Mr. Haworth, Belfast; Mr. Walker, Lancaster; Dr. Lyon, Sheffield; Mr. Wright, Matlock; Mr. Orchard, Dublin; Mr. Tully, Hastings; Dr. Nicholson, Colchester; Mr. Low, Clapham-common; Dr. Dalrymple, Whitehaven; Mr. Skrimshire, Blaenavon; Mr. Stenhouse, Glasgow; Mr. Owen, London; Mr. V. Fassati, Martigny; Mr. Klugh, London; Mr. Kilvin; Mr. Aymaud, Ipswich; Mr. Alfotd, Somerset; Mr. Graves, Knighton; Mr. White, Nottingham; Dr. Maskew, Fawley; Mr. Orr, Wanstead; Dr. Davies, Bridgend; Mrs. Theobald, Leicester; Messrs. Duncan, Flockhart, and Co., Edinburgh; Dr. Bourke, Earl's-court; Messrs. Schweitzer and Co., London; Mr. Grace, Bristol; Mr. Davis, London; Messrs. Beale and Son, Brighton; Mr. Reid, Bonnybridge, N.B.; Mr. Mellor, West Malling; Mr. White, Suffolk; Mr. Orr, Didsbury; Mr. Mackey, North Shields; Dr. Croke, Beverley; Mr. Sankey, Shrewsbury; Mr. Deacon, Manchester; Mr. Ormsby, Bootle; Dr. Banks, Liverpool; Mr. Van Praagh, London; Dr. Liveing, Manchester-square; Messrs. Fenwick and Chinery, London; Mr. James, London; Dr. Williamson, Scarboro'; Mr. Dodsworth, Shanklin; Mr. Hale, Chesterfield; Mr. Spicer, Chard; Mr. O'Malley, Luton; Mr. Dilwarth, Preston; Mr. Hawkins, Bedford; Mr. Gordon, London; Mr. Weatherbe, Hull; Miss Sworder, London; Dr. Ritchie, Otley; Mr. Armison, Penrith; Dr. Sutherland, London; Mr. Cochrane, Wigtonshire; Mr. Cox, London; Mr. Barclay, Glasgow; Mr. Livingstone, Hursley; Mr. Heywood, Manchester; Spes, London; B. P. P., London; A. B., Bradford; Grove House Private Asylum; Pupil, Dorset; A., Leeds; D. D. D., London; Lady Superintendent, Hulme; Antiseptic, London; Maltine Manufacturing Co.; Deaconesses' Institution, Tottenham; Beta, London; Canary Islands, London; Alpha, Cheshire; Medical, Peterborough; County Asylum, Rainhill; J. L., London; Tracy, Wilts; Beth, London; B., Montgomeryshire; Genuine, London; Harding, London; Practice, Devon; Temperature, Falmouth; Student, Edinburgh; Advertiser, Rowsley; A. Z. Z., London; Bacchus, London; Dido; Aquila, Norwood; Medical, Dublin; Tutor, Newcastle-on-Tyne; R. E., Shepton Mallet; Midlands, London; Medicus, Sutton; Ivan; A. B., South Penge; J. K., London; Health, London; H. S., Bucks; Medicus, London; Philomel, London; W. W., Bradford; Doctor, Maida-vale; Doctor, London.

NEWSPAPERS.—*Wrexham Advertiser, Evesham Standard, Manchester City News, Whitehaven News, Scotsman, Leicester Daily Post, Sussex Daily News, Bristol Times, Norfolk Daily Standard, Windsor and Eton Gazette, Manchester Examiner, Western Daily News, Local Government Chronicle, Hertfordshire Mercury, City Press, Mining Journal, Devon Weekly Times, Huddersfield Chronicle, Carnarvon Herald, Builder, Broad Arrow, Staffordshire Chronicle, Ashton-under-Lyne Reporter, Chemist and Druggist, Scarborough Evening News, Bradford Observer, Liverpool Mercury, Surrey Advertiser, Weekly Free Press and Aberdeen Herald, Reading Mercury, Warrington Observer, Windsor and Eton Express, Kilkenny Journal, Sunday Times, Sheffield Daily Telegraph, Metropolitan, Spectator, Oldham Standard, West Middlesex Standard, Architect, Mexborough and Sevinton Times, Law Journal, The Schoolmaster, Saturday Review, Ceylon Catholic Messenger, Pharmaceutical Journal, Guy's Hospital Gazette, Irish Times, Evening News (Sydney), Vegetarian, Adelaide Evening Mail, Morning Post, Galignani's Messenger, Public Opinion, Temperance Caterer, Admiralty Gazette, West Middlesex Advertiser, Glasgow Herald, Leeds Mercury, Observer, News of the World, Age, Liverpool Daily Post, United Service Gazette, Scots Observer, Bristol Mercury, Torquay Directory, Corriere D'Italia (Rio de Janeiro), Surrey Comet, Country Brewers' Gazette, Indian Engineering, &c.*, have been received.

Medical Diary for the ensuing Week.

Monday, September 1.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations daily at 10 A.M.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.

CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.

ST. MARK'S HOSPITAL.—Operations, 2.30 P.M.; Tuesday, 2.30 P.M.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.

UNIVERSITY COLLEGE HOSPITAL.—Ear and Throat Department, 9 A.M.; Thursday, 9 A.M.

Tuesday, September 2.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.; Fridays and Saturdays at the same hour.

GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.

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Wednesday, September 3.

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UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Ear and Throat Department, 9 A.M.

Friday, September 5.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, September 6.

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UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; and Skin Department, 9.15 A.M.

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